

VOL. I. { NEW YORK: }  
32 Liberty Street.

OCTOBER, 1885.

{ CHICAGO: } NO. 12.  
12 Lakeside Building.**President Calvin A. Richards.**

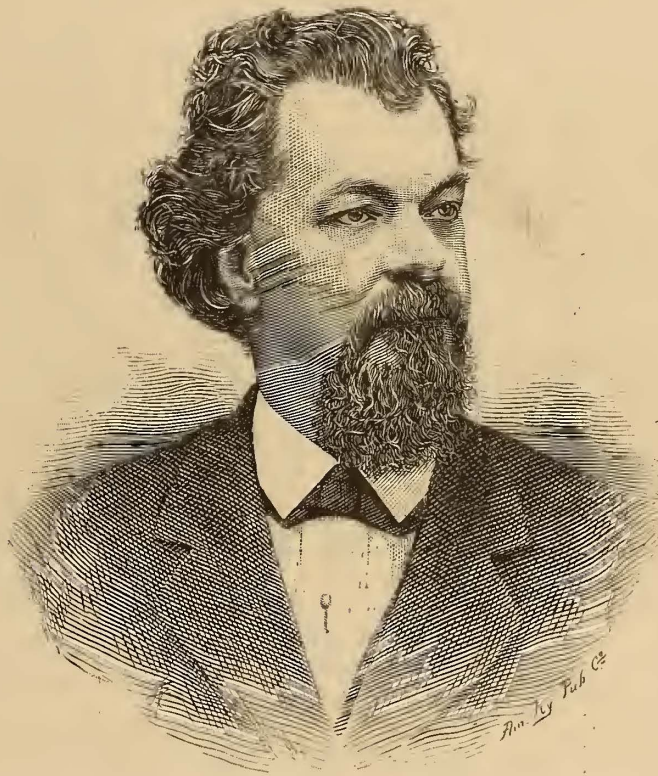
The subject of our sketch, President of the American Street Railway Association and of the Metropolitan Railroad, of Boston, was born in Dorchester Mass., fifty-seven years ago, and received his education in the public schools of Boston. His business training was received with his father, an old and honored merchant of Boston.

Mr. Richards was engaged in business, himself, until 1872, when he retired from active work, and with his family, made a long visit to Europe. On his return from abroad, he was induced to take the position of director in the Metropolitan Railroad Co.; this position he held for eight months, when he was chosen President of the corporation. The directors were desirous of having a man at the head of the corporation whose executive ability had been proven by his former success in life. When he assumed the presidency of the road he knew nothing more about street railroads than any other merchant, but he did not accept the position until he had had the most positive assurances from the directors that he should manage the road alone, with what is called "one man power," until he had placed its affairs on a footing satisfactory both to himself and to them.

When he finally took the position he found that the affairs of the road, through loose and inattentive management, were in great disorder. It took him from three to five years to lift the corporation out of its difficulties and to place it upon a plane, which its almost unbounded success since would seem to have warranted. He attributes the success of the road solely to the fact that he has always endeavored to furnish the public with the best class of accommodations, keeping always in

advance of the times; to do that, has now become a motto with him and guides him in all his railroad transactions.

The railroad which he represents is now probably the largest street railroad in the world in equipment, in miles of track, and in the number of passengers carried.



C. A. RICHARDS, PRES. AMERICAN STREET RAILWAY ASSOCIATION.

When he assumed the charge of it, twelve years ago, it was but one fourth as large as it is now. Its growth has been steady, strong, and successful, and yet to-day the public demand for its services requires its present equipment, and it is necessary, to satisfy and gratify the public.

Early in life, Mr. Richards had a wide parliamentary experience, serving as councilman, public land commissioner, and as alderman of his native city, Boston; an experience which gave him a thorough knowledge of municipal affairs.

He is five feet, eleven inches in height, and weighs two hundred pounds. As for his taste outside of "cold hard business," he is entirely domestic, his home and

family circle engrossing all his time outside of business hours.

**The Car Timer's Last Gasp.**

"Timers is like machines," said a gray, oracular driver on the Third avenue line.

"Timers is like machines. They gets so used to timin' that they can't let up, but keeps along at it sleepin' or wakin'. If some o' them fellers was a-dyin' they'd want to spot the ticker afore peggin' out, just to see if death was up to the scratch. Why, there was Pete Long—the allfiredest particularist man I ever see. You couldn't be a second afore or behind but Pete was after you wid a sharp stick. Well, Pete was a-timin' up at the end o' the line, and one day he was so cussed took up with layin' out a driver that a truck tongue fetched him in the back and laid him out. Then the hosses tramped about on him some, and he wus all broke up when they got him to the sidewalk. There wasn't sense enough in him t' open his eyes as he laid there, and they wus thinkin' o' pourin' some whiskey in him, as likelier than anything to fetch him to, when

along comes Forty-nine half a minute late. "Pete rolls over on his side and grabs his silver bull's-eye super. Then he opened his eyes and set 'em on the ticker and be-ginned t' gasp like's he was a-dyin'."

"'Hev you enny message?' says one o' the boys, thinkin' he had sumthin' for his famerly to hear.

"'Yes,' gasps Pete Long.

"'Wot is it?' says the feller.

"'Tell Forty-nine,' says Pete, still a-gaspin', 'tell Forty-nine that he's a half behind; and tell him,' says he a-settlin' down weak as a child, 'tell him that another go o' that kind and—the old man 'll—give him—the grand bounce.'

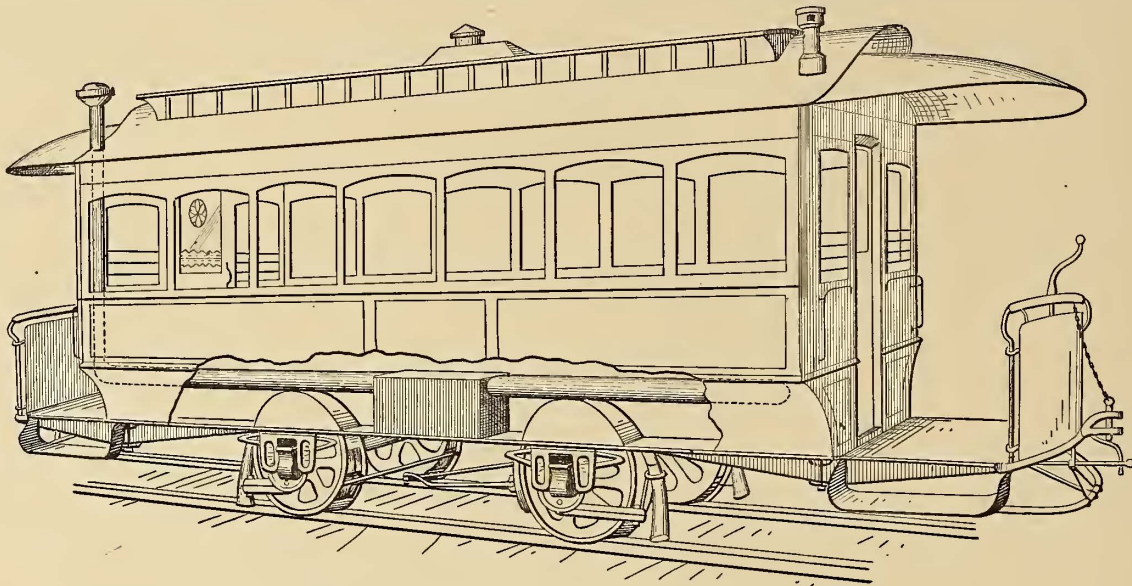
"Then he swooned."

### Car Heating.

MESSERS. EDITORS:—I saw in the *JOURNAL* an article from the *Chicago Tribune* on the subject of car heating, in which the author claims "that it is possible to make street cars comfortable in cold weather by means of a furnace on the front platform, provided with pipes to distribute the heat through the car near the floor." I agree with the gentleman to a certain extent; but the alternate change of front renders the system slightly impractical for general purposes, and suggests that a greater experience than can be obtained with pen and ink is absolutely necessary to give a practical solution of this subject, that has involved the attention of captains, colonels and generals, with the aid of some of the most enterprising street car companies in testing hot sand, hot slugs, and the various devices for storing up heat, together with oil stoves, coal stoves and furnaces of dif-

every case, without any exception, where we obtain the greatest satisfaction for the amount paid. The success of the rapid transit roads, the competition of parallel surface lines and the profits of every enterprise that meets a general demand, all tend to the one result, and the time is not far distant when street cars will be provided with heaters under the seat that will supply a uniform heat at any desired temperature during the entire day's run without special attention. This will again present something new, and danger will be the cry, but only a cry without an echo, for the usefulness of Nature's provisions is just in proportion to the development of intelligence and skill in handling them, which is fully verified by the history of the previously unknown, invisible power that was first halted by the illustrious Ben Franklin, and is to-day being handled, harnessed, and used for various purposes with no greater degree of intelligence than is necessary in

welfare of their patrons (so far as it will pay) was the principal reason that led to the production of the invention represented by the accompanying illustration,\* which portrays a car heater of modern design. It is not the result of twenty-five or thirty years experience in the business, and did not require brain-racking work by the midnight lamp, or the long undivided efforts of a wonderful inventive genius, but was simply invented by rule, and is not justly entitled to the favor of such weighty evidence, although it will meet the requirements to the nearest point of perfection that can be obtained without some modification in the design of cars. Perhaps the reader of this article may have some curiosity in reference to this rule, therefore I will explain that it is only necessary at first to obtain a correct knowledge of the requirements of the subject and then form an unknown combination of the best known principles to meet such requirements.



VANDEMARK'S STREET CAR HEATER APPLIED TO A CAR,

erent designs; and with all this experimenting have not, up to this date of 1885, produced *one good street car heater* that is known to the trade. I claim the right to know something about this business, having had an experience costing me a few hundred dollars, and think I can convey some idea of a heater that will meet the requirements, sufficient to satisfy the public quite as well, if not much better, than rubber-lined crevices, or a bale of straw. Street cars can and will be made comfortable. The public demands it, and the wonderful inventions of the last few years have shown conclusively that the word *impossible* has, together with canal packets and stage coaches, gone out of date for want of use. The rapid strides of progress in every branch that adds to the comfort and convenience of the human family are to continue unchecked, regardless of that class who are always ready to handicap anything new, and honestly believe that the practical point of success for all purposes is limited within the scope of their extensive education and experience.

"Competition is the life of business." We take our choice *and pay our money* in

managing the historical hind-footed mule.

The system of heating street cars with straw is one of the old, well demonstrated methods, and is undoubtedly so very old that the modern public fails to appreciate the generous motive manifested by its liberal use.

Rubber-lined crevices are new for the purpose, and have only been adopted by some of the most enterprising roads. I have not been favored with the extreme pleasure of stepping from a temperature of zero into one of these comfortable air-tight conveyances, and can only imagine that the exhilarating effect of the commingled redistilled products that would naturally emanate from the respiration of a car load of passengers would immediately inspire a feeling of thankfulness for the privilege of partaking of such a concentrated conglomeration of all the good eatables and drinkables, with the addition of an indescribable variety of flavors, for the small sum of five cents.

This is an age of improvement. The success of every industry depends on keeping pace with the times; and the manifest interest of corporations in the comfort and

The heating of street cars evidently requires the finest system that can be produced to give perfect satisfaction, which is sustained by the fact that it has not been heretofore attained. The heater must not occupy any useful space; must be free from danger, dust, dirt and odor; must supply just the desired temperature throughout the car at all times and under all the conditions to which it is subjected, with sufficient ventilation to maintain a wholesome atmosphere.

To meet such requirements necessarily involves the best known principle for producing and circulating heat that can be applied to this particular purpose. The only practical heat producing substances for the purpose are coal and oil.

The difficulty encountered with the use of coal is to safely dispose of the remaining hot mass at the close of the day; and to maintain the necessary supply of heat, and regulate it to any desired degree, bids defiance to all that human skill can do.

The oil used with the illustrated appliances is atomized and burned without a wick, and can be regulated to any desired

\* A. B. Vandemark, 1584 Broadway, N. Y. City.

temperature and extinguished by the turn of a valve. It is claimed by some of the street railway officials that it is the most desirable to have the heater extend below the sills of the car; but it is very evident that the reason for such a conclusion is not based on the fact that 150 cubic feet of cold air through the stove for the combus-

Fig. 2

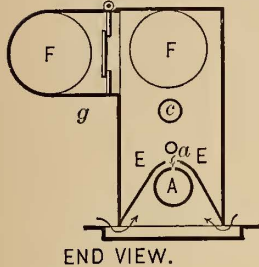


Fig. 1

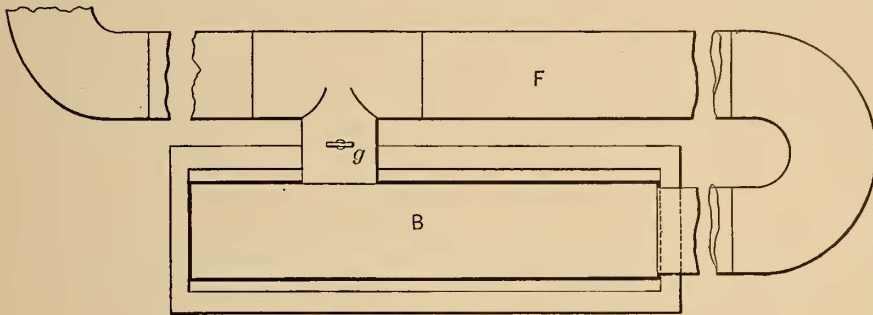
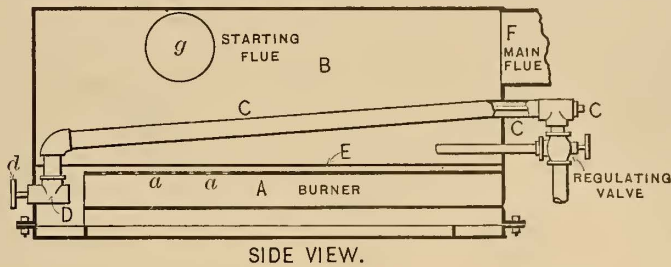


Fig. 3

tion of each pound of coal used, together with the necessary circulation around it, for the protection of the car, would constitute a refrigerating process that would be slightly detrimental to the comfort of the passengers in extremely cold weather. However, the principle of extending the fire-box outside is first-class for summer or even winter use in a warm climate.

The amount of heat transmitted through a heating surface is just in proportion to the difference in the temperature of the heat on one side and the substance to be heated on the other, which is the foundation of the design of the illustrated system for circulating and distributing the heat throughout the car by means of the smoke pipe. This heater has been thoroughly tested.

HEATER.

Carriage of Goods on Tram Lines.

In England the heavy rates charged by railway companies, and the comparative freedom from opposition which they enjoy, make every new experiment for carrying either goods, parcels, or passengers of interest. Tramways are spreading in all directions, and at Stoke and neighborhood, Manchester and its suburbs, Birmingham and the towns in the Black Country, the carriage of goods and parcels is likely to become a lucrative and successful business. One of the first experiments of the kind is that of the South Staffordshire and Birmingham Steam Tramways Company. Negotiations are going on for committing to the company the carriage of parcels throughout the entire district. From the inherent facilities which tramways afford for the collection and distribution of goods, it is thought a good profit can be obtained from the new traffic.

Knocking Down Fares.

EDS. STREET RAILWAY JOURNAL:—

It really seems that the main idea of many men is not to make themselves as valuable as possible to their employers, but to devote a large part of their time to devising some means whereby they can acquire

and was given a job on the Milwaukee Avenue line, where, so far as is actually known, all went well, until about two or three weeks ago, when it came to the knowledge of the company that he had been previously employed on another line of street railway. A close investigation was at once set on foot, and it was found that the man had originally been farming in a place not very far from Chicago, that, about a year and a half ago, at the earnest recommendation of an ex-official of the city, he was given work on the North Chicago Railway, with which he stayed for nine or ten months, when he was discharged for "running a low card;" which, being interpreted, signifies stealing. His real name is Herrman Rhode, by which he was known while in the employ of the N. C. Ry. Co., affecting the alias of William Peters when he applied to the W. D. Ry. for work. It has not been fully determined what punishment will be meted out to him; that matter is still occupying the attention of the road. It is an open fact at headquarters that a heap of this kind of robbery is going on, and the company is in full possession of sufficient evidence to make it pretty warm for quite a number of these "knockers-down." The above circumstances show pretty conclusively how easily a company can be imposed upon, and deceived by false representations, or what might well be regarded as the very best of recommendations.

wealth easily, by robbing their employers of their due, in moneys collected for fares. A case in point has just come to light in Chicago.

The Chicago West Division Railroad, which behaved so liberally toward those engaged in the late strike, suspecting that all was not as straight as it might be with some of its conductors, had them closely watched; and on August 17 circumstances proved that its suspicions were not unfounded, when the assistant superintendent of the company corralled one, calling himself William Peters, and compelled him to unbutton his vest, and he took therefrom an ingenious device known among the fraternity as the "brother-in-law."

The device consists of a bell, cased in a piece of perforated zinc, with a wire attached, ending in a brass button, of similar pattern to those used on the uniform. The *modus operandi* is simple in the extreme:—In a crowded car, where the conductor has hard work to worm his way through, collecting fares, it is a hard matter for any one to notice—even if they wished to—what "register" the conductor uses for tallying the fares; so, instead of pulling the knob of the bell punch, the button is pulled, and out rings the little registering bell, as clearly and innocently as one can imagine. The company had undoubtedly lost considerable money by this course of systematic robbery. In the course of the day the writer chanced upon some of the officers of the company, and referred to what had appeared in the dailies about the "brother-in-law," and the party caught using it.

It appears that said Peters came to seek employment of the West Division Company about the middle of last May; he was well endorsed by a prominent Chicago banker,

Replying to a question as to how the company felt after the effects of the recent strike, the superintendent said, "The bad effects of the strike were very noticeable for two or three weeks after cars had recommenced running; the men would do their work in a most off-hand, careless, slovenly manner, which caused us no little inconvenience; but we gave the matter close attention, and by weeding out the objectionables, we are now in pretty good running order once more—in fact in a far better condition than before the strike commenced—so, out of all apparent evils, good cometh."

ARTHUR VERNON TREVOR.

[FOR THE STREET RAILWAY JOURNAL.]

The Coming Race.

BY CITIZEN GEORGE FRANCIS TRAIN.

When thought is heard by Microphone  
And wish detected by Machine  
Mankind can play Race game alone  
In "Psycho-Transformation scene!"

Invention marching on apace  
Electric wires Cosmos around  
To evolve the Human Race  
With energy electric bound!

When Bulwer's coming race arrives  
And truth and manhood find their own,  
The fittest man who race survives  
Will occupy the "Psycho-throne."

The "Psycho-throne" of universe  
With Ego dead to world rehearsal  
That shadow which all nations see  
Is "Universal-sympathy!"  
(Not "Ghost hand Immortality!")

This is the only paper devoted wholly to street railway interests. \$1.00 a year.

**The Freese Electric Car Motor.**

This new motor,\* patented only last February, has been put through a successful trial on the Hestonville, Mantua & Fairmount R. R. Co.'s tracks, in West Philadelphia; and other motors, we understand, are now building for this road.

Power is supplied by a Shipman oil en-

gine. Another drive connects this with a similar split sprocket on the rear axle. To secure greater leverage in starting, rounding curves and ascending grades, a 6" sprocket friction pulley is provided on the counter-shaft, to which the power can be shifted at will; enabling the car, also, to run at reduced speed, without slowing the engine.

The fuel is kerosene oil of 110° test, and is carried in a tank under the car seat. It requires only oil and water to run.

In the preliminary trial, its regular 4 H. P. engines not being ready, the company used a small 2 H. P. engine, which, however, gave entire satisfaction. As stated above, the engines to be used in regular practice are of the Shipman patent,

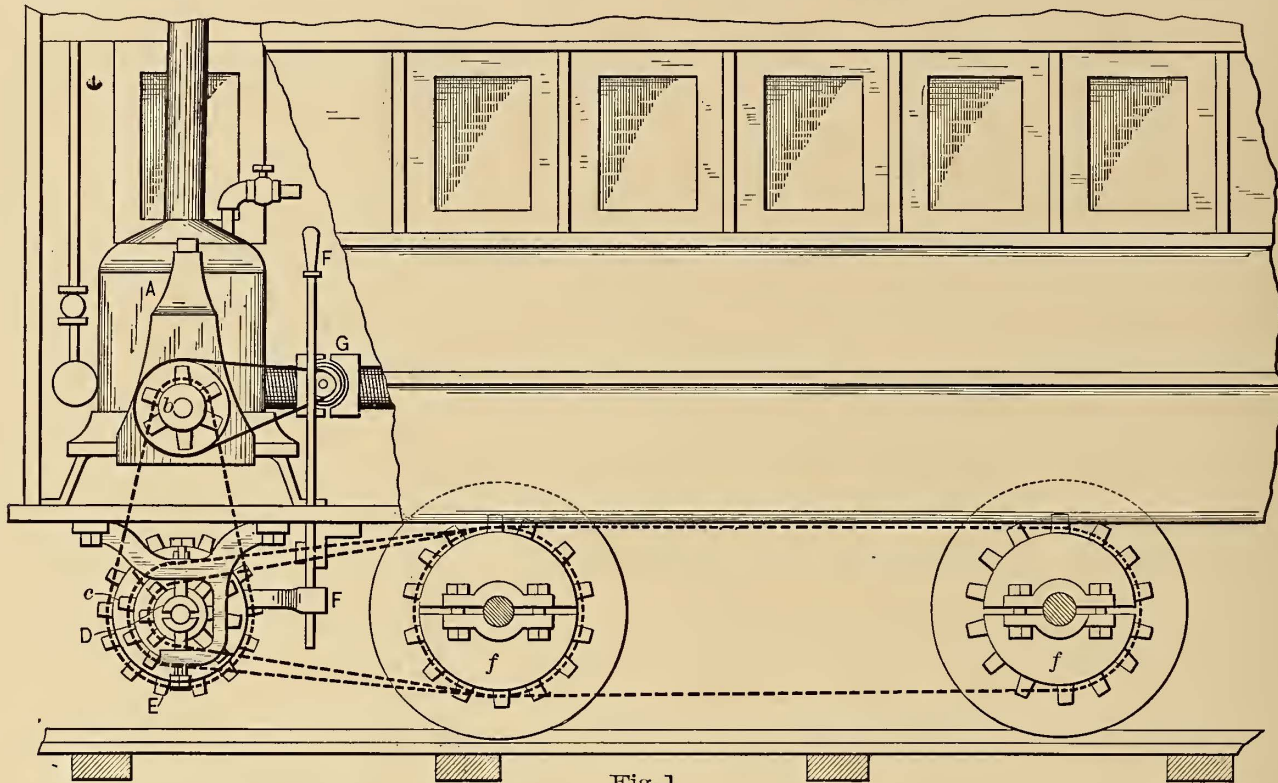


Fig. 1

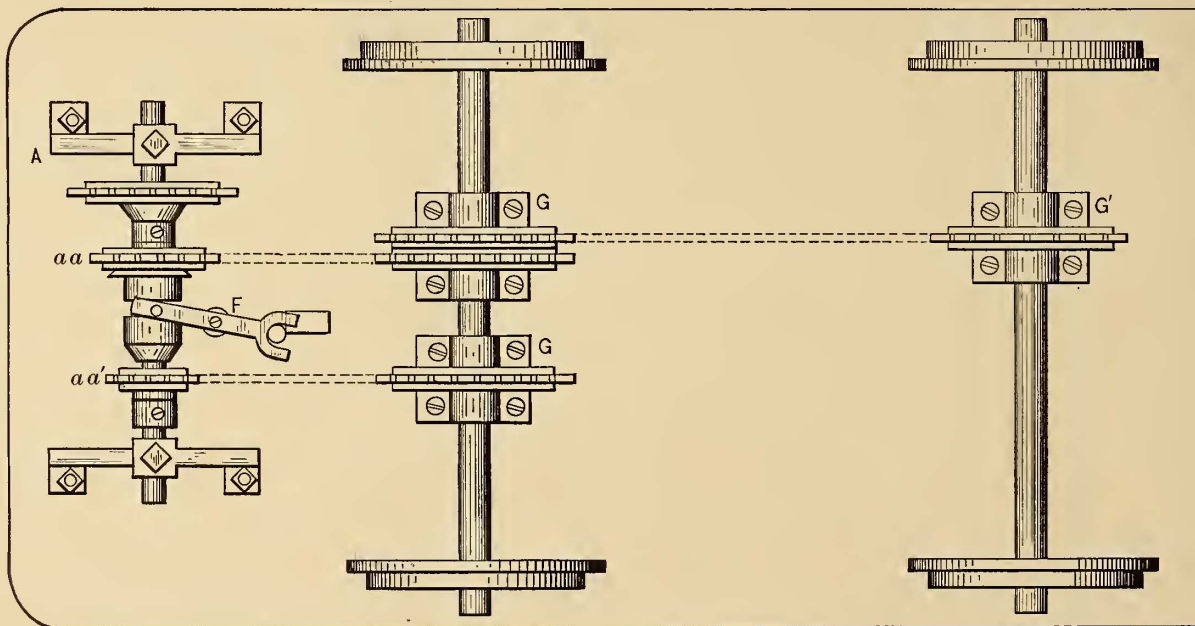


Fig. 2

Am. Ry. Pub. Co.

**THE FREESE ELECTRIC CAR MOTOR.**

gine, placed on the front platform of the car. An 8" sprocket wheel *A A* is connected by a chain drive or "link belt" with a 15" sprocket wheel *A* on the counter-shaft *B*. A 12" sprocket friction pulley, also on the counter-shaft, connects through a drive chain, with an 18" twin split sprocket wheel *E* on the front axle of the

The engine need never be stopped, except for backing, but the car is set in motion by shifting a lever *F* to one side or the other, so as to bring into play one or the other of the two friction gears on the counter-shaft. This gear is shown in detail by Fig. 2. When the car is stopped, the lever is placed in the centre "notch," so that both clutches are freed.

and will have cylinders 4" in diameter by 6" stroke, making 275 revolutions per minute, giving, when geared from an 8" sprocket to the 15" sprocket on the counter-shaft, and from the 12" friction pulley to the 18" sprocket on the car axle, 6 7/8 H. P., and a speed of 7 1/2 miles per hour; and, when geared through the 6" friction pulley to the second combination, it will generate

\* Automatic Car Motor & Electric Lighting Co., P. O. Box 449, Philadelphia, Pa.

9½ H. P., and a speed of 3½ miles per hour.

The compactness of the device and its simplicity commend it, the engine being so small that it can be set on the platform of an ordinary street car, with little alteration, the only addition necessary being two stringers under the platform,—where the steps are usually placed—to strengthen it. The actual space occupied by the machine is 36"x27" on the floor by 40" in height, so that there will be plenty of room left for the attendant to work in. The total weight is 800 lbs. Under one seat will be placed the water tank and under the other the oil tank.

The Shipman engine being automatic and very simple, requires no experienced engineer, but only a man of ordinary intelligence to run it; his only care being to keep his two tanks supplied. The entire apparatus can be placed on a car ready for running, within twenty-four hours. The

**A New Plan for Electric Conveyance.**

An ingenious Philadelphian has invented a device for telegraphing passengers and goods through the air. The field it purposes to occupy is a comparatively narrow and modest one, as it does not seek to rival the locomotive, but is satisfied with the prospect of operating in districts incapable of furnishing traffic adequate to the support of a railway. Sturdy posts may perhaps be called its road-bed, as they support its two cables, one of which is 8' higher than the other, additional cables being supplied to insure absolute safety. The cars are suspended from the upper and supported by the lower cable. Steam engines and dynamos at each end of the line supply the driving power, and by means of the car wheel axles and intervening wires the current is passed through an electrical motor working under or by the side of the car.

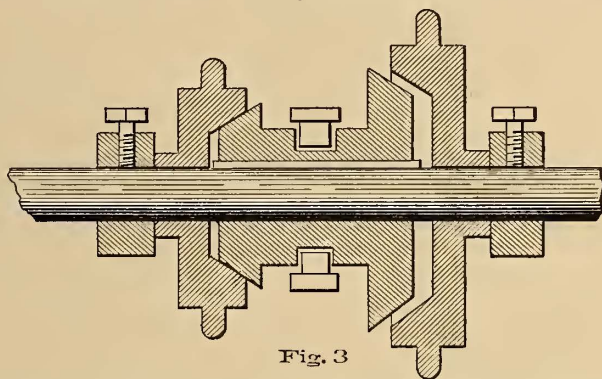


Fig. 3

fire is so arranged as to light and extinguish itself, if occasion requires it, so that when the engine stops, expense ceases. Thirteen gallons of oil are required for running a car fifteen hours: that is, say \$1 per day, a saving of about \$10 per day, per car, over horse power. It is further proposed to run pipes around the car, so as to heat it during the winter time, and do away with the diphtheria breeding wet straw, which has been so often condemned by the authorities. In summer the exhaust steam will be condensed under the car, so as to obviate visible vapor, and to deaden the sound of the exhaust. Sand boxes will be carried under the seats, for use in slippery weather. The friction gear will be encased, so as to prevent wear from dirt. Furthermore, as the engine is constantly in motion, it is proposed to attach a small dynamo, and run four incandescent lights, two inside the car, and one on each platform.

An engine, now under way, will be 4 H. P., with double cylinders and reversing bar, slide throttle, etc., a very complete machine. The boiler is of a new pattern, made of coiled wrought iron pipe, and having fifty square feet of heating surface, and will be fully able to make steam for a 5 H. P. engine, while being at the same time unusually light in weight.

The inventors write us that their first complete car will be in practical operation the latter part of the present month, and that they believe they have "struck the *summum bonum* of car motors."

G. B. H.

The carrying capacity of the cables varies, inclusive of cars, from several hundred-weight up to a ton, and repeated tests have demonstrated that smooth and swift motion can be attained. During its stay at Manly & Cooper's, Forty-second street and Elm ave., this curious appliance attracted much attention.—*Bulletin of the Franklin Institute Novelties Exhibition.*

**The Elevated Road Traffic During the Grant Obsequies.**

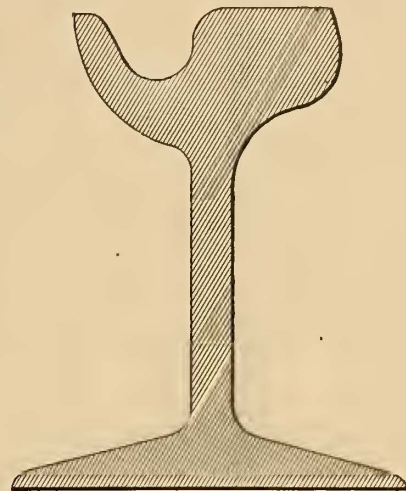
Instructions were issued for ticket agents to make up memoranda of their sales during the day of the Grant obsequies, and collectors were afterwards sent out to gather them up and bring them down to the main office at Rector street and Broadway. Up to 11 A. M. the travel on the Sixth avenue line amounted to 54,000 passengers, an excess of 22,000 over bridge day; on the Third avenue line 71,000 passengers were carried; on the Ninth 23,000, and on the Second 11,000. This total of 159,000 passengers was an excess of 45,000 over bridge day up to that hour. The rush began before eight o'clock, and at South Ferry it seemed as if most of the residents of Brooklyn and Staten Island were hurrying into town to crowd the trains. The trains were all heavily laden up to noon at the lower stations. From 11 o'clock to 7.30 in the evening, when the second and last calculation of the passenger traffic of the day on the elevated roads ended, the tide of travel continued to set in strongly. The Sixth avenue road carried in all during the

day 163,000 passengers; the Third, 143,000; the Ninth, 46,000, and the Second, 26,000, making a grand total of 378,000 passengers. On bridge day the elevated roads carried 316,000 passengers up to 7.30 P. M.

**An English Girder Tram Rail.**

We think that we are justified in saying that there is a strong tendency towards insisting on greater and greater vertical strength in rails for regular steam roads and for tramways.

The strap rail has given place to the bull-head and the "T" or Vignolles section; and both the "Philadelphia" and the

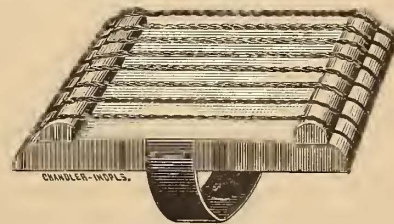


"centre-bearing" tram rails are gradually getting combined with iron girders to replace the separate wooden stringer. We show herewith a section which is meeting with favor in England. As will be seen, it has the deep web and broad flange desirable to give vertical stiffness with comparative lightness and all requisite lateral stiffness; and at the same time its head, which is in section a compound of the Philadelphia and the centre-bearing types, adds to the vertical and lateral stiffness and to the wearing qualities.

Properly fished or otherwise joined, this should for many reasons make a good rail; although for the narrow tires used by most light American vehicles it might prove more dangerous than to the British "flat-footed" wheels.

**The Jay-Eye-See Curry Comb.**

Herewith we illustrate an article claimed by the manufacturers\* to have many points of superiority over the ordinary curry



comb. It is light, cannot scratch or hurt the horse, cleans off mud and sweat with ease and rapidity, and will wear a long time.

\*Muncie Novelty Co., Muncie, Ind.

**Covert's Breast Chain.**

This chain\* is so made as to be adjustable to different lengths when it is desired to change a team from one wagon to another, or to change teams on a car. There is a "Covert snap" in the top link on each side, and one plain link after another may be taken up or dropped out to change the length; the snap-link uniting the hame-ring with the plain links of the chain. The snap connection in the centre of the chain is saddle-shaped and is intended to obviate the wear that chains and neck-yoke rings are subjected to, and to do away with the necessity of thickening the chain in the

construction of the device and the way it is applied are very clearly shown in the cut. The tendency of the springs is to force the knee back to its normal position, and straighten the leg.

\*Alphonse Cote, 850 Seventh Avenue, New York City.

**Reliance Slip Link and Safety Hook.**

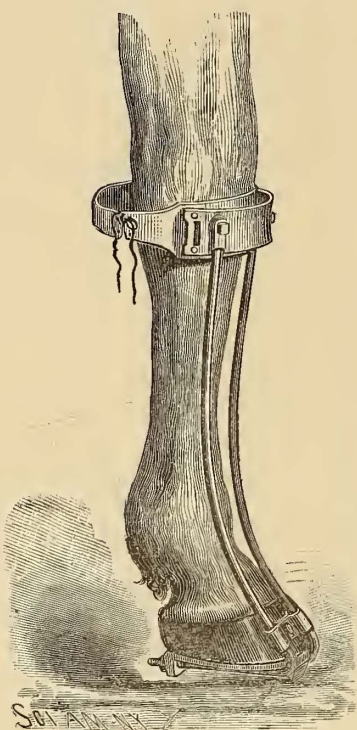
This is designed to afford an easy means of disengaging from chain or hooks. It is especially useful for horses, and the illustrations we give show various applications of it as applied for harness links.\* When a

This slip link is intended to afford an easy means of releasing a fallen horse before it has had time to injure itself or others in its frantic endeavors to rise. The larger illustration shows clearly the principle of the link. By pressing the trigger ring—which is held in position by the spring shown in dotted lines—the catch is released and the link opened; when closed the tendency of the pull is to tighten the hold.

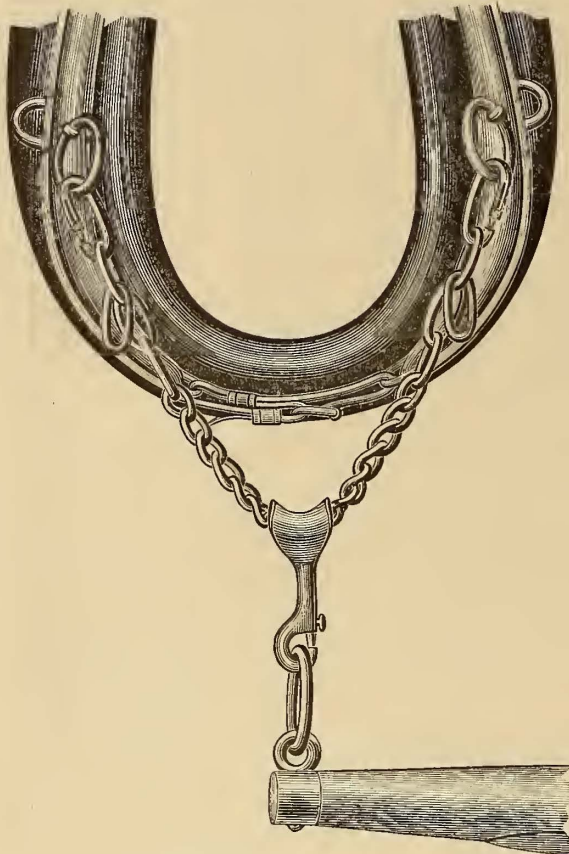
\* Phoenix Metal Die & Engineering Co., 29 Addington st., York Road, Lambeth, England.

**The Mekarski System.**

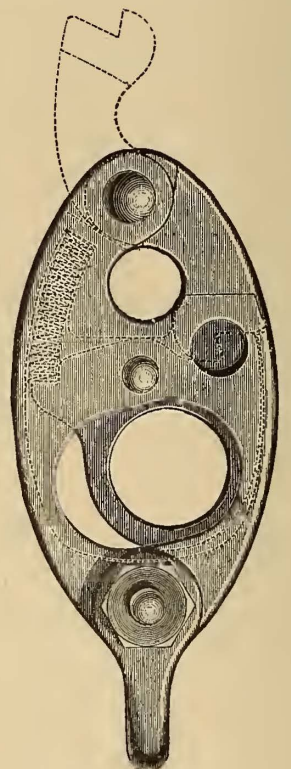
A writer in an English contemporary, referring to a certain car worked at the Inven-



COTE'S SELF-ACTING SPRING LEG BRACE.



COVERT'S BREAST CHAIN.



LYON'S SLIP RING AND SAFETY HOOK.

centre of its length. The link snaps are also utilized by horse railroad companies as temporary repair links when a chain breaks while on the road; their easy adjustment rendering them particularly desirable for that purpose.

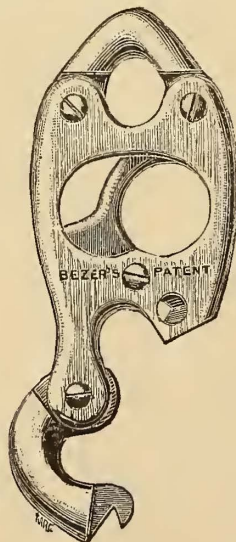
\* Covert Mfg. Co., West Troy, N. Y.

**Cote's Self-Acting Spring Leg Brace.**

The engraving represents a self-acting spring leg brace which the inventor\* guarantees will cure any knee-sprung or ankle cocked horse in a few weeks.

Laced at the knee joint is a strap, to the opposite sides of which are attached the ends of a metal band which is so curved that it touches the band only at the ends. Secured to this band are the ends of two springs which pass down and under the foot, being kept from spreading by a metal clasp, and being held securely in place by being passed through holes in the rear corks, nuts being screwed on the ends. The

horse falls or meets with an accident much danger is incurred and time lost from its



being found impossible to release an animal from its harness quickly after it has fallen,

tions Exhibition by compressed air, which had been described as on the Mekarski principle, says that it is not the invention of Mekarski. This plan was invented by James Glazebrook, an Englishman, in the year 1797. A few years since some Stock Exchange schemers and company promoters, as well as some financial speculators, aided by the efforts of a highly scientific consulting engineer, got up a company to purchase the "invention" of Mekarski for some £5,000, and asked the public to contribute £250,000 to enable them to do so! On these facts as to the non-originality of the invention coming to the ears of those on the board who were not cognizant of the state of the case, they "bust up" the whole concern, since which time it has not been heard of until cropping up at the Inventories. Read over and consider Glazebrook's specifications, and then read and consider No. 3,498 of 1875, that of Mekarski. It will be seen that the wonderful invention and principle of Mekarski in 1875 were recorded in the Patent Office by an Englishman in 1797 and in 1801.

Demorest's Duplex Fare Register.

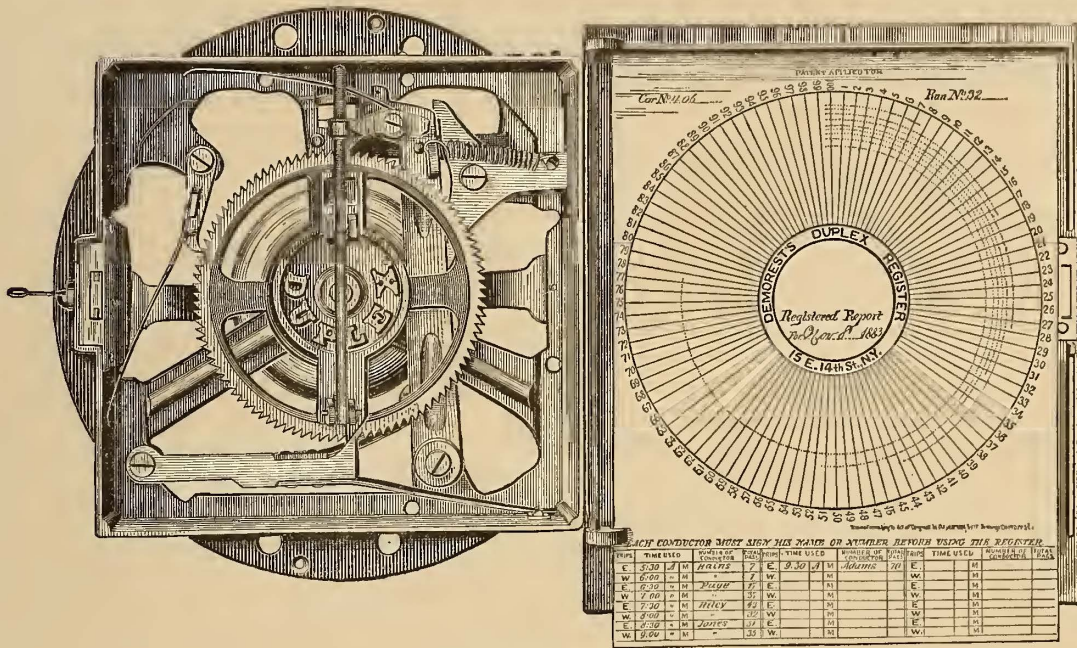
This apparatus\* is called "duplex" because it makes a pencilled register upon a removable paper dial sheet inside the case and under the ordinary dial, showing by an index hand the total number of passengers properly accounted for by the conductor during each trip (or half trip). The outer and visible dial plate shows to all in the car each passenger accounted for, and as fast as accounted for. On the inner and concealed paper dial, is recorded in pencil, the number of passengers thus accounted for on the outer dial during each half trip, during the day's work. The conductor on

changed, so that at each subsequent "round" the pencil makes a separate trace, concentric with the previous ones.

The "skip" between the end of one half trip and the beginning of another is accomplished by moving the ratchet wheel outward on its axis, a distance equal to the thickness of the plate, so as to disengage the lower ratchet-pawl; a stop in the proper position automatically re-setting the index and pencil at zero.

The makers have another form of register, which marks continually, at a much less price than the former; its construction is substantially the same, so far as simplicity is concerned. This continuous record-

pavements, macadamized roads, etc., and seems especially applicable to street car horses. Mr. Gourdier says his invention is the result of many years experience with horses, and that it is based upon well-known principles of veterinary science, and that his shoes will cure any case of lameness due to quarter crack, contracted feet or corns, and many other cases of lameness whose cause is obscure. He is prepared to guarantee freedom from such equine pedal ailments as long as his shoes are worn. Its practical efficiency is vouched for by numerous street railway men, among whom we note the name of Mr. Superintendent Wilson, of the Eighth Avenue line, where these shoes ar



DEMOREST'S DUPLEX FARE REGISTER.

commencing his day's work must sign the sheet, which will contain the permanent record of each half trip for that day.

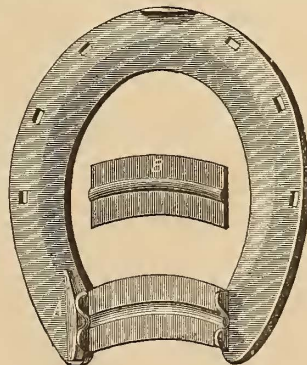
The sheet or dial is turned in at the receiver's office at the end of the day, to check any errors made by the conductor in his daily report. It must tally exactly with the report, in order to relieve the conductor from all responsibility. This system tends to make the conductor his own detective.

As will be seen by reference to the engraving, the front of the case on being unlocked, can be hinged back, thus swinging clear of the inner paper dial, the front dial and its index hand, as well as the actuating and the recording mechanisms. The index hand is worked by an ordinary ratchet wheel and double pawled lever. A pencil borne on a threaded rod, travels in unison with the index hand, being always directly underneath it; so that if the "zero" radial line on the paper dial sheet is under O on the outer dial plate, the pencil will commence to record at zero; and if the last fare rung up and shown by the index hand is No. 100, the pencil line will be a complete circle. At the end of each half trip, the distance of the recording pencil from the center of the dials is

ing device is used in connection with the makers' new combined fare-box and register, as well as on cars with conductors.

The Gourdier Horse-Shoe.

MESSRS. EDITORS:—I recently examined the rubber cushioned bar horse-shoe\*. The illustration herewith represents the upper and lower surfaces of this shoe, which is made of steel, with or without heel expanders, and in fifteen sizes, readily adapted to



all kinds of feet. Its distinguishing feature is the use of the rubber cushioned bar, which furnishes an elastic support for the frog of the foot, the lack of which support, it is claimed, is the cause of most of the lameness in horses.

The Gourdier shoe is designed for use on

constant use. Mr. Gourdier does not claim a simple bar horse-shoe as novel, but even without his rubber cushion he claims for his shoe a superiority in shape and economy over those forged by the blacksmith. He invites correspondence and a trial.

T. B. G.

\* Henry Gourdier, 1584 Broadway, N. Y.

Elevated and Surface Travel.

It appears that of the \$32,500 a month received by the Brooklyn Elevated Railway Company less than \$2,000 is taken from the Greene and Gates avenue line. This route meets very closely the rapid transit competition. It seemed certain that it would suffer greatly, and it was even predicted that its business would be practically destroyed. The prediction is not verified. Of course other routes have been drawn upon by the new road. The DeKalb avenue holds the same generally parallel relation to the elevated as the Greene and Gates, and its losses may be roughly estimated at the same amount. The Nostrand avenue, Reid avenue, Franklin avenue and Broadway cars have lost, but not so largely. Allowing for all of these concessions of old passengers to the rapid transit road it is evident that this line and also the horse car routes have gained and are constantly gaining new customers by the increase of the population of the city. Before long the additional travel will have made up to the surface lines all they have surrendered, and eventually their business will be extended.

\*A. J. Demorest, 15 E. 14th street, N. Y.



MONTHLY, \$1.00 PER YEAR.

E. P. HARRIS, General Manager. P. G. MONROE, Gen. Western Manager.

## American Railway Publishing Co.,

32 LIBERTY ST., NEW YORK. 12 LAKESIDE BUILDING, CHICAGO.

S. L. K. MONROE, Secy and Treas.

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South-Western District, 709 OLIVE ST., St. Louis, Mo. FRANK TRAINOR, Manager.

New York District, HENRY D. COZENS, Advertising Manager.

### Special Rates to the St. Louis Convention.

Very advantageous rates have been secured from eastern points to St. Louis and return, for the purpose of attending the Street Railway Convention. Tickets good from October 17 to 27, for the round trip, will be sold at the following rates: From Boston and Worcester, \$25; Springfield, \$24; from New York, Albany and Schenectady, \$20; from Syracuse, Rome and Utica \$19; from Rochester \$18. Tickets can be procured in New York of Mr. C. F. Doane, G. P. A. of the Central, 413 Broadway, in Boston at the office of the B. & A. R. R., on Washington Street, and at the various other points mentioned at the ticket offices of the Central road. A certificate signed by Wm. J. Richardson, Secretary of the Association, will enable parties to procure these tickets. A party will doubtless leave the Grand Central Depot, New York, at six o'clock Monday evening, October 19, arriving in St. Louis at 7:30 the morning of the 21st.

### Exhibition of Street Railway Appliances at the St. Louis Convention.

For the convenience of manufacturers of street railway appliances and others who desire to exhibit goods at the Convention of the American Street Railway Association, to be held at the Southern Hotel, St. Louis, October 21, next, the publishers of the STREET RAILWAY JOURNAL have arranged with the proprietors of the hotel for such space as may be required for that purpose. By this plan exhibits may be attractively arranged, and unless desired by the exhibitor, need not be accompanied by a man in special charge. No charge will be made for space and no expense need be incurred by the exhibitor except transportation charges, and such incidental expenses as unpacking and placing in position. Freight or express should be prepaid, and goods sent to our address, in care of Southern Hotel, St. Louis.

Quite a number of large manufacturers of street railway appliances have signified their intention of taking part in this

exhibition. Among them we may mention; The John Stephenson Co., Andrews & Clooney, Lewis & Fowler M'fg. Co., Railway Register M'fg. Co., A. A. Anderson, J. S. & W. S. Silver, and the Neverslip Horse Shoe Co.

### The St. Louis Convention.

The following is from a recently issued circular from the Secretary's office:—

The American Street Railway Association has now a membership of one hundred and twenty-three companies.

The fourth regular annual meeting will be held at the Southern Hotel, St. Louis, Mo., the third Wednesday in October (the 21st), 1885, commencing at 10 o'clock, A. M.

Committees will be prepared to report on the following important subjects: "Diseases common to car horses, and their treatment;" "progress of the cable system of motive power;" "progress of electricity as a motive power;" "repairs of tracks;" "rules governing conductors and drivers;" "taxation and license;" "ventilation, lighting and care of cars."

It will be seen that a large amount of work has been laid out for the Association, and it will, therefore, be desirable that delegates from a distance should reach St. Louis the evening previous, in order that the business of the Convention may be proceeded with promptly. It is also desirable, on account of the privilege thus afforded for renewing and making acquaintances.

During and since the last meeting of the Association the membership has been doubled, and it is known that a large number of companies, especially in the west, will be added at this meeting. Each company should be represented.

In order to obtain the best accommodation available at the Hotel, it is desirable that each company inform the proprietor at its earliest convenience, as to the accommodation it will require.

### Street Car Seat and Floor Coverings.

It is not an uncommon occurrence to hear passengers on our surface roads complaining that seats are not as comfortably upholstered as formerly. They miss the old three-inch cushions and upholstered backs. It is a reason for devout thankfulness that this ancient harbinger of filth and vermin is gone forever. Though they might be comfortable for a few weeks they soon became hard and uncomfortable to sit on, and worn, torn, and slovenly in appearance. The more modern seat of cane or lattice benches, covered with soft durable material, or uncovered even, is much to be preferred, for comfort, cleanliness, durability, and attractiveness. The furnishings of a car should be simple, attractive and durable—and the progress made in this direction in the last two or three years is very gratifying.

The floor covering is another feature in which the modern car far excels. The old hemp carpet was a constant accumulator of dirt, filth and disease. The wood car-mats keep the car floor comparatively clean in

the worst weather, as the mud drops through the slats. They are readily removed, allowing of frequent and thorough cleaning, and are a decided improvement. Any one who has seen a hemp mat taken from a car after a day's service will agree with us that health and decency demand its eternal condemnation.

### Bother and Worry.

It is a peculiarity of the human mind, and one which is more strongly impressed upon the American mental organization than upon any other, that it is as necessary to work and plan in order to keep the mind in strength and good health, as it is to take a certain amount of bodily exercise in order that the bodily functions shall be normally maintained. Hence, to sigh for absolute and continuous leisure is unwise. Mental stagnation is akin to physical "atony." Cares are but the daily toil, necessary or self-imposed, which keep the mental brawn and sinew firm and tense; they are "good for our wholesome."

Yet, while keeping this in mind, we must equally remember that "bother and worry," incessant and gnawing, about pettiments and nothings, are straining influences which are akin to those excessive and long-continued bodily exercises that eventually wreck the system.

Between the idler who is

... a watch that wants both hands,  
As useless when it goes as when it stands,  
Life's cares are comforts; such by heaven designed;  
He that has none, must make them or be wretched.  
*Young, II, 160.*

... soft buzzing slander; silly moths that eat  
An honest name  
Low-breath'd talkers, minion flippers,  
Cutting honest throats by whispers,  
Be thou as chaste as ice, as pure as snow,  
Thou shalt not escape calumny.

*Hamlet, III, 1.*

and the fretful worker who chafes his soul-case to early destruction, there is the *juste milieu* of earnest, regular mental and physical activity, which strengthens the faculties while it yields grateful and ample return for the labor and thought expended.

THE DAFT ELECTRIC MOTOR—Experiments have been going on for some time with the new motor Benjamin Franklin. Every night after the trains on the road have stopped running, the motor glides silently from the switch to the main track with an occasional lightning-like flash. Mr. Daft and assistants are busy with the motor all night testing its powers, and the peculiar phases that have developed in applying this system to an elevated roadway.

Last week four cars making the regular train that is used on the elevated roads were attached to the motor. In the first experiments only one car was used. Two cars were subsequently tried, and these having moved to Mr. Daft's satisfaction the trials with four cars were made. The result was fully as successful as with three. The train does not start with a jerk as when a steam engine is used, but the instant the electric current is turned on the motor and the train begin to move in a smooth gliding motion. The speed slackened at the steep grades on the Ninth Ave. road above Twenty third-st. This Mr. Daft said was owing to the fact that only half the current was used



## Notes and Items.

[All our readers are particularly requested to send us, at the earliest possible moment, notes concerning actual or proposed improvements in street railways. It is by this means that the STREET RAILWAY JOURNAL will increase its usefulness to each one who receives it.]

ATHENS, GA., is organizing a street railway company.

BURLINGTON, VERMONT, is to have a new street railway.

THE CITY RAILWAY Co. of Mobile, Ala., is laying down some 35 lb. T rail.

THE MACON (GA.) & SUBURBAN R. R. Co. will build two miles of new track soon.

THE GREENPOINT & LORMER ST. ROAD, Brooklyn, will add to its equipment.

THE TRACTION COMPANY of Philadelphia has declared a dividend of \$1.50 per share.

JACKSONVILLE, FLORIDA. Work has been begun on the City & Suburban Street Railway.

THE THIRD AVENUE (N. Y.) road uses the Lewis & Fowler register on its new cable road.

THE SEVENTH AVE. (N. Y. CITY) LINE is being repaved through Sullivan and Thompson streets.

MILWAUKEE, WIS. Washington Becker is the owner and manager of the West Side Street Railway Co.

THE JOLIET (Ill.) Street Railway is owned by J. A. Henry Esq., A. Bischman is Supt. and J. E. Henry cashier.

THE UNION PASSENGER RAILWAY Co. of Baltimore it is understood is now using the Daft motor with success.

THE CITIZENS STREET RAILWAY, of Indianapolis, Ind., has adopted the Josephine D. Smith Center Car Lamp.

J. & W. S. SILVER, 13 Barclay street, New York, have taken the agency for the Randall patent brake rod.

THE BATTLE CREEK (Mich.) STREET RAILWAY has elected George Detwiler, President; and J. W. Hahn, Gen. Manager.

GEORGIA. A bill is before the Georgia legislature, to incorporate the Baltimore Place and Peters' Park Street Railway Co.

NEW ORLEANS, LA. Bids are invited by the Board of Management for an electrical railway on the exposition grounds, New Orleans, La.

THE ELGIN CITY (ILL.) RAILWAY Co., owned by B. C. Paine, Esq., we are informed, is thinking of taking a partner, or an outright sale.

THE PHILADELPHIA TRACTION Co.'s cable road is now running, we understand without difficulty. Some fifteen new "motor" cars will be added.

THE SIXTH AVENUE (New York) road has adopted the Lewis & Fowler register beginning September 1st. A portable register was formerly used.

MADISON, WIS.—D. K. Tenney has been chosen Vice-president, Secretary and Treasurer, of the Madison Street Railroad Co., and G. W. Case Supt.

THE EWING AVENUE HORSE RAILROAD Co.

(Hyde Park Ill.,) is now in process of construction. Andrew Rehm is President and Andrew Kimball Secretary.

THE HOUSTON, WEST STREET AND PAVONIA FERRY RAILROAD COMPANY has petitioned the Board of Aldermen for permission to extend its present tracks.

THE TENTH AVE. (N. Y.) CABLE ROAD'S new cars are elegant specimens of the Master Car Builder's skill. They were built at the Third Ave. Company's shops.

THE SIXTH AVE. R.R. Co., (New York,) has just put on ten new cars built by the John Stephenson Co. They are equipped with the Josephine D. Smith Center Lamp.

CLARKSVILLE, TENN., is to have a street railway, the Clarksville Street Railway Co. having been organized at that point by J. F. Shelton, H. H. Sharpe and others, to build the road.

THE PORT HURON (Mich.) STREET RAILWAY'S officers for the ensuing year are, Pres.—Jno. P. Sanborn; Vice-Pres.—Frank A. Beard; Sec., Treas. & Gen. Man.—J. R. Wastell.

ROCKFORD, ILL. The following are changes in the officers of the Rockford Street Railway Co.: L. Rhodes, Vice-Pres.; Miss A. C. Arnold, Sec.; Fred Haines, Supt.

THE NASHVILLE & EDGEFIELD (Tenn.) STREET RAILWAY has elected officers for the ensuing year, as follows:—Pres.—John P. White; Sec. & Treas.—H. B. Stubblefield; Supt.—Daningerfield Deaderick.

THE THIRD AVE. R.R. Co., (New York,) lights all its new cars with the Josephine D. Smith improved Center Lamp. The new Tenth Avenue cable road uses the same lamps in its new cars.

THE BLEECKER STREET (N. Y. CITY) LINE is discontinuing the use of fare boxes and has conductors on its cars now, many of which are "bob-tails." Its new cars, we understand, are all two horse length.

THE BROOKLYN ELEVATED RAILWAY COMPANY has carried two million people since it began operations last May, without injuring one of them. The only delay was one of ten minutes on the day after the road was opened.

THE BLEECKER STREET (N. Y. CITY) LINE has put on some very handsome cars from the works of the John Stephenson Company, recently. They are equipped with ventilated roof, passenger telephone, the Smith centre lamp, &c.

THE LEWIS & FOWLER Mfg. Co. has secured from the Philadelphia Traction Co. a large order for registers. When the road is fully equipped the order will be the largest the Lewis & Fowler Co. has had from a single road.

THE METROPOLITAN STREET RAILWAY Co. of Boston, is building ten new closed cars, eight to be done by November first. Work on its new shops and stables is to be vigorously pushed, with the idea of having them completed this season.

THE PHILADELPHIA TRACTION Co. is grappling with the question of five cent fares,

the *Press* having opened up the question by sending reporters over the line, who insist on paying only five cents on the grip cars. The fight promises to be lively.

YONKERS, N. Y. A new street railway is contemplated by capitalists to connect Yonkers, N. Y., with New Rochelle, thus having a complete connection with the Sound and Hudson River. There are at present two lines of stages, which have all they can do.

ALBANY N. Y. The Metallic Street Railway Co. has awarded Messrs Andrews & Clooney of New York city, the contract for all the iron required for the construction of the Greenbush Street Railway, and will when finished connect that village with the capital city.

THE RAILWAY REGISTER Mfg. Co. in its suit against the North Hudson R. R. Co., has received a decision from Judge Nixon in its favor and against the Lewis & Fowler Mfg. Co. relative to the removable push key register heretofore used by the latter company.

THE PEOPLE'S PASSENGER RAILWAY Co., Philadelphia, has recently added thirty new cars, of improved pattern, high and roomy, to the equipment of its Girard Avenue line, and has in process of construction ten additional cars. They are all built in the company's shops.

THE JOHN STEPHENSON Co. has done a much larger business during the year ending September 1st. than the previous year. We notice various lots of cars in the process of construction, among them cars for the Fourth Avenue and Sixth Avenue, New York and the Brooklyn City, of Brooklyn.

THE BEAVER FALLS (PA.) STREET RAILWAY Co. is reported as doing an excellent business. It built three and one-half miles of track and had cars running in forty-one days. The road is paved with coarse and fine slag from blast furnaces, and gives evidence of making a first-class road bed.

MESSRS. PUGH & RUSSELL, manufacturers and dealers in street railway supplies, No. 27 Park Place, inform us that they will occupy, on the 1st inst., new and commodious offices in the Stewart Building—Broadway, Reade and Chambers streets—their quarters having proved inadequate to their increased business.

A SURFACE ROAD THROUGH CENTRAL PARK is proposed by a company headed by Ex-Postmaster-General Thomas P. James. The company has petitioned the Board of Aldermen for a franchise for a road from Eighty-fifth street and Madison ave. to Fifth ave., thence across the Park to Eighty-sixth street and Eighth ave. to the Hudson river.

PROPOSED CROSS-TOWN LINE IN PHILADELPHIA. The franchises, right of way, &c., for a new cross-town line on Lehigh ave., in the northern section of Philadelphia, have been in the hands of (we believe) the Traction Co. for some time; such a line would be very useful, but there should be one still further north, on Tioga or Venango streets, for instance.

DUNCAN'S MANUAL of British and Foreign Tramways, with maps and abstracts of accounts, traffic tables and directory for 1885, is at hand. We note several of our enterprising manufacturers and dealers, John Stephenson Co., Andrews & Clooney, A. Whitney & Son, etc., are in the advertising pages with their announcements.

THE BROOKLYN RAILWAY SUPPLY Co. says it is very busy now upon orders for its improved snow sweeper and plow, equipped with the cylinder broom and other devices. It is claimed for these machines that with the same outlay of power they will do more rapid and more thorough work than any other sweeper. They may be operated either by animal or steam power.

THE DENVER ELECTRIC RAILROAD Co. will commence operating its road this month. It has three miles of track laid and graded, and proposes to lay twelve more by next Spring. The electric system and motor have been designed and patented by Prof. Short of the Denver University, who is also the patentee of a dynamo for electric lighting as well as other electrical appliances.

THE NEW BROADWAY CARS built by the Pullman company are about the same length as the old cars, but of greater height. The tallest man can stand erect in one without damaging his high silk hat. The windows run to the roof, enabling passengers standing to see clearly to the sidewalk without stooping. The seats are elegantly cushioned and have spring bottoms.

THE QUEBEC STREET RAILWAY has the Lewis & Fowler register on six of its cars. The Hornum is used on its other cars. It approves of the L. & F. as the most conspicuous, taking the attention of the passengers; and less likely to be put out of order. It has purchased one hundred tons of steel rails this Summer and is relaying a portion of the track with them. Traffic is scarcely equal this year to that of last, but not a deficiency to cause despondency. The road always pays good dividends.

THE BROADWAY UNDERGROUND RAILWAY scheme is again being agitated, and it is said the two companies now holding charters intend consolidating at an early date, and commence at once a continuous underground roadway from the Battery to Forty-second street. Gen. McClellan has given his opinion, as an expert engineer, that the expense will not exceed \$1,200,000 a mile, complete and in running order. Jay Gould is reported to be actively interested in the new company.

THE REPORT OF THE MANHATTAN ELEVATED RAILROAD, for the quarter ending June 3, 1885, compared with last year is:—Gross earnings from operation, 1884—\$1,126,413 50; 1885—\$1,773,523 15. Operating expenses (excluding all taxes), 1884—\$651,011 41. 1885—\$914,441 22. Net earnings from operation, 1884—\$475,402 09; 1885—\$859,081 93. Income from other sources than operation, 1884—\$15,177 65; 1885—\$17,284. Gross income from all sources, 1884—\$490,579 74; 1885—\$876,365 93. Deduction from income for interest, taxes and rentals, 1884—\$268,808 91; 1885—\$462,431 91. Net in-

come from all sources, 1882—\$221,770 83; 1885—\$413,934 02.

THE FIFTH AVENUE RAILWAY COMPANY, with a capital stock of \$2,500,000, has been incorporated. Its object is to build a road from the southerly end of South Fifth avenue at Canal street, with double tracks in, through and along South Fifth avenue and the public street, through Washington square to Fifth avenue; hence through Fifth avenue in a continuous line to the Central Park at or near Fifty-ninth street. The opposition to the scheme bids fair to be as great as was encountered by the Broadway road; but the gradual but steady encroachment of business up the avenue makes it evident that it will soon become a great shopping thoroughfare, and the success of the promoters is only a question of time.

THE THOMPSON CAR STARTER. We hear that considerable success has been achieved on various street railways with the use of this car starter. We learn that it is in use on several street railroads in Cleveland, and gives entire satisfaction, and that they do not have any trouble with its making horses balky, an objection which has been generally raised against the use of car starters. During the course of a public test recently made of the starter we hear that the car on which it was applied was stopped on a steep hill at a point where there was a sharp curve. The horses could not start the car at that point, but without any help from them the starter put the car in motion, after which the horses easily kept it going.

ATTEMPT TO MURDER A RAILWAY SUPERINTENDENT:—Superintendent James T. Gorman, of the Philadelphia Traction Company, was induced to leave his home, Sept. 4th, by a message that he was needed at his office. When he reached Budd and Haverford road he saw two men, one of whom put a pistol to his head and told him to get down on his knees. Instead of doing so, Mr. Gorman grappled with the man, took the pistol from him, and then handed him over to a policeman. The assailant was James P. Powers, who had been a gripman for the Traction Company, but who had been discharged by Mr. Gorman. Powers had a hearing at the Central Station, where he was represented by counsel, who intimated that his client was drunk. The prisoner was held in \$1,500 for assault and battery with intent to kill and \$500 for carrying deadly weapons.

THE (N. Y.) THIRTY-SECOND STREET LINE. The Railroad Committee of the Board gave another hearing in the case of the Thirty-second and Thirty-third Street Railroad Company. Several persons appeared against granting the franchise. William De Groot, chairman of the committee of property owners, presented a protest signed by 478 owners of 604 lots, valued at \$12,000,000, against the proposed road. President Cammain of the Real Estate Exchange, Dr. George B. Brooks and others objected to the route. C. Y. Bell, representing residents in Thirty-second

and Thirty-third streets east of Fourth avenue, favored granting the franchise and presented a petition signed by more than 2,000 persons. The hearing was adjourned to September 30, at 1 P. M.

THE BROADWAY AND BLEECKER ST. LINE'S CONNECTIONS. The order for a peremptory mandamus granted by Justice Ingraham, in the Superior Court, Special Term, requiring the Commissioner of Public Works to grant permits to Jacob Sharp's Twenty-third St. Railway Company for the removal of the pavement in Broadway at the intersection of Ann, Canal and Bleecker sts., in Center st., near the Hall of Records, and at Canal and Elm sts., for the purpose of laying such connections, switches, curves and turn-outs as may be necessary to connect with the Broadway Railroad, has been settled. It is ordered that the permits contain such directions as to the restoring of the pavements as in the judgment of the Commissioner will be most conducive to the public interests, and that the Commissioner pay \$50 costs to the railroad company.

THE BROOKLYN ELEVATED TO CONNECT WITH THE BRIDGE. The bridge workmen are engaged in tearing out a panel on the Washington street side of the station to prepare for the new stairway to connect with the extension of the elevated, active work on which will commence at once. A regular double trackway will be built from Washington and York streets up to the trestle now standing at Sands and Washington, but no rails are to be laid on it this Fall as it is not intended to run trains up to the bridge entrance. Instead a covered walk will be built under the road, above the ground, and resting on cross girders supported by the main columns, running to the foot of the new bridge stairway. A toll box will be placed at the top of the steps after the manner of the one in New York, so that passengers will not be compelled to climb the stairways. Cooper, Hewitt & Co. have assured Superintendent Martin that the necessary iron is all made up, and that there will be no delay in the work of erection.

THE BROOKLYN CITY RAILROAD COMPANY has ordered forty-three new cars from the John Stephenson Company's works of New York. Eight of them have been received, but the completion of the others has been slightly delayed, with the consent of the railroad company, in order to allow the car company to fulfill a previous contract. The cars will be distributed to the various branches of the City Railroad. They are of the most approved pattern, have ventilating roof, a telephone call, which summons the conductor by a whistle, operated by a bellows and string, windows set in narrow metal sashes in place of wide, wooden ones, and a patent bumper that prevents the whiffletrees from parting from the car in case the horses attempt to run away. Perforated wood, covered with carpet, is used for seats. Several of these cars will be placed on the Halsey street line, and in the course of a month they will be housed in the \$75,000 depot now in process of construction, at the junction of Halsey street and Broadway.

VETERINARY COLLEGE OF THE UNIVERSITY OF PENNSYLVANIA. The new college of the Pennsylvania University was opened on September 2d. Dr. R. S. Huidekoper is Dean of the veterinary faculty. The new college buildings are at Thirty-sixth and Pine streets, with the other college buildings. They have a frontage of 245' and are two stories high. They are fitted up with all the varied appliances that are called into use in the treatment of sick horses, and include even a large blacksmith shop, with eight double forges, where students will be taught the scientific method of shoeing horses and making shoes out of old as well as new iron. There is an armory for the keeping of the necessarily large instruments. The school will not begin operations until October. Animals will be received at the college between 10 A. M. and 3 P. M. daily, and will be treated free of charge for those unable to pay. Those who are able to pay will be charged \$1 per day for the keep of the horse, and a reasonable extra charge for treatment. The cost of building the college was \$50,000, of which \$18,000 was loaned for interest and incidental expenses during the opening year. Next year the students of the first three years' course will be graduated.

THE FORTY-SECOND-ST. AND ST. NICHOLAS AVE. LINE. Justice Barrett in the Supreme Court has dissolved the injunction restraining the Forty-second Street, Manhattanville and St. Nicholas Avenue Railway Company from constructing and operating a railroad in Eighty-sixth street, between Tenth ave. and Riverside Drive. The company was organized in August, 1878, under the general railway law, and took by assignment the franchise to construct a railroad in Eighty-sixth st., and other streets and avenues, granted by the Legislature of 1873. Justice Barrett in his opinion says: The Act of 1873 (Chapter 835) is in my judgment controlling. There is no getting over the fact that the franchise in question is thereby expressly made assignable. The defendant, lawfully incorporated under the general railway act of 1850, was competent to take, as assignee, this franchise. Having done so it was in the same position as many other horse railroads, namely, a corporation organized as such under the general act operating under a special charter. The right of a corporation thus to construct and operate a horse railroad in this city has become so firmly established that it cannot well be questioned at this late day. . . . It is entirely clear, too, that the charter of 1873 was not affected by the constitutional amendment of 1875. The latter was undoubtedly prospective and not retroactive in its operation. . . . The same may be said of the Act of 1884, which expressly reserved existing rights.

NEW YORK CITY CROSS-TOWN LINES. Mr. Cleary, at the meeting of the Aldermen Saturday, September 19, presented a petition from the Twenty-eighth and Twenty-ninth Street Crosstown Railroad Company, which seeks a franchise to construct a railroad. This will begin at the foot of East Twenty-third street, running along Twenty-

third street with a double track to Avenue A, to Twenty-fourth street, to First avenue, to Twenty-sixth street, to Second avenue, to Twenty-ninth street, by single track to Tenth avenue, by double track to Twenty-sixth street, to Thirteenth avenue, to Fourteenth street, returning along Thirteenth avenue to Twenty-sixth street, to Tenth avenue, to Twenty-eighth street, by single track to Second avenue, to Twenty-fourth street, to Avenue A, to Twenty-third street, to the ferry; also from Twenty-ninth street and Tenth avenue along Tenth avenue by double track to Thirty-fourth street, and thence to the North River; also from Second avenue and Twenty-eighth street through Twenty-eighth street by a single track to First avenue, up First avenue, and by a double track through Thirty-third street to the East River; also from Twenty-ninth street and Second avenue easterly by single track to First avenue, or by and through the nearest streets and avenues to the streets and avenues mentioned. Rastus S. Ransom, as President of the company, made the application. It was referred to the committee on railroads.

PROPOSED SURFACE ROADS IN NEW YORK CITY. Articles of incorporation have been filed of three street railways, in all of which Rastus S. Ransom and Joseph Kunzmann, of New York; Josiah F. Bailey, Frederick M. Walton and John J. Patterson, of Philadelphia; Harry G. Hinton, of Brooklyn; and Edward J. Knauer, of Astoria, are named as the directors, and in each of which \$4,000 is subscribed (\$1,000 per mile) and \$400 paid in. The roads are as follows:—

The Broome, Delancy and Spring Street Road to run through Delancy-st., Bowery, Spring, West, Desbrosses, Watts, Sullivan, and Broome sts., beginning at the ferry at the east end of Grand-st. The capital stock is \$1,000,000, to be divided into \$100 shares.

The Twenty-eighth and Twenty-ninth Street Cross-Town Railway of New York, the location asked for being given in another item in this paper. Capital stock \$750,000.

The One-hundred-and-sixteenth Street and Fort Lee Ferry Company, to begin near the east end of One-hundred-and-sixteenth-st., through that street to New-ave., One-hundred-and-twenty-sixth-street, Lawrence-st., Broadway, West One-hundred-and-thirtieth-st., North River. Capital stock \$500,000.

ELECTRIC RAILWAYS IN BALTIMORE. The trials of the electric railway in Baltimore are reported in the local papers as very satisfactory. The *American* says: The electric motors, Morse and Faraday, did a prosperous business on the trial day, transporting passengers to and from Hampden, Baltimore county. The two large Catonsville cars were attached to the motors and carried over one hundred passengers every trip. Over one thousand persons from Baltimore went out to get a ride behind the motors. The majority of the young men and boys crowded about the centre rail in

squads, from the stable yard to a considerable distance up Huntington avenue, and experimented with the rail charged with electricity. The more timid, however, stood at a respectful distance and watched the experiments. No harm resulted from standing on the centre rail with one foot and resting the other on the protectors, but woe to the man who would touch the ground while one foot rested on the rail. The shock was so great that some were knocked down. A person standing on a piece of dry wood may touch the centre rail when it is charged with electricity, and may also grasp it firmly with one or both hands, without being shocked in the least; but if the wood is damp, he cannot bear the shock a second. Mr. Robbins permitted the rail to be thus tampered with in order to let the people know that it was dangerous to be too familiar with it. The armature of "Morse" became overheated in the afternoon, and the motor was taken to the yard for repairs.

PHILADELPHIA TRACTION CO. The annual meeting of the stockholders of this Company was held on September 1. The following officers were elected for the ensuing year: President, William H. Kemble; First Vice President, P. A. B. Widener; Second Vice President, William L. Elkins; Secretary and Treasurer, D. W. Dickson; Directors, W. H. Kemble, P. A. B. Widener, W. L. Elkins, Thomas Dolan, James McManes, Joseph B. Altemus.

The following statement of business of the Traction Company for the year ending June 30, 1885, was presented: Receipts, \$2,553,652.55; expenses and rentals, \$2,227,795.57; net profit, \$325,856.98.

James T. Gorman, for a number of years Superintendent of the West Philadelphia Passenger Railway, has been appointed General Superintendent of the entire cable system of the Philadelphia Traction Company. Mr. P. A. B. Widener stated that the Columbia avenue and Seventh and Ninth streets sections of the cable road would be put in operation in about a month. He said everything could be got in readiness in ten days from the present time for putting on the cars, but the management prefers to wait until the Market street cable is fairly tested. He also stated that the cable on the latter road had been in continuous operation for the past two days, and he thought that all difficulties had now been surmounted, and that there would be no delay hereafter to be attributed to defective construction of the cable or machinery. Mr. Widener said further that it is the intention of the Traction Company, in the course of a month, to turn the cars now running on the southern end of Seventeenth and Eighteenth streets into Chestnut and Walnut streets, as is now done with the Nineteenth and Twentieth streets branch, thus carrying passengers through to and from Front and Walnut streets without change of cars and for one fare. —*Ledger.*

Subscribe for STREET RAILWAY JOURNAL, Only \$2.00 a year.

# OFFICIAL LIST OF THE STREET RAILWAYS IN THE UNITED STATES & CANADA.

Compiled from data furnished the editors of "The Street Railway Journal," by the officers of the various roads.

[The following is a complete list of the Street Railways of the United States and Canada, so far as we have received the official returns from the various roads. Will those roads not reported kindly fill out the blanks sent them and mail to us without delay, so that they may be properly represented in the STREET RAILWAY JOURNAL?]

ABBREVIATIONS—m, miles; g, gauge; lb r, pounds rail to the yard; c, cars; h, horses; m, mules. Officers' addresses are the same postoffice as the company unless otherwise specified.

**AKRON, O.**—Akron St. Ry. & Herdic Co. 2½ m, 6c, 91 h. Pres. Ira M. Miller, V. Pres. James Christy, Treas. B. L. Dodge, Sec. F. M. Atterholt, Supt. John T. Metlin.

**ALBANY, N. Y.**—Watervliet Turnpike R.R. Co. 7½ m, 26-45 lb r, 27 c, 143 h. Pres. Chas. Newman, Sec. & Treas. P. Way, Supt. M. C. Foster.  
The Albany Ry. 10 m, 4-8½ g, 35-47 lb r, 51 c, 194 h. Pres. Supt. and Treas. John W. McNamara, Sec. Jas. H. Manning.

**ALLENTOWN, PA.**—Allentown Pass. R.R. Co. 3½ m, 6 c, 22 h. Pres. Samuel Lewis, Treas. & Sec. Joseph E. Ballet, Supt. Russel A. Thayer.

**ALTON, ILL.**—Alton & Up. Alton Horse Ry. Co.

**ALTOONA, PA.**—City Pass. Ry. Co. of Altoona. 3½ m, 5-3 g, 43 lb r, 17 c, 38 h. Pres. John P. Levan, Sec. & Treas. L. B. Reifsnider, Supt. John J. Buch.

**AMSTERDAM, N. Y.**—Amsterdam St. Ry. Co. 1½ m, 4-8 g, 25 lb r, 3 c, 10 h. Pres. Henry Herrick, Treas. David Cady, Sec. M. L. Stover.

**ANISTON, ALA.**

**ASHTABULA, O.**—Ashtabula City Ry. Co. 4 m, 4-8½ g, 40 lb r, 6 c, 60 h. Owner & Prop. Jno. N. Stewart.

**ATCHISON, KAN.**—Atchison St. Ry. Co. 5½ m, 4-8½ g, 20-30 lb r, 19 c, 60 h. Pres. & Gen. M. J. H. Beeson, Treas. H. M. Jackson, Sec. J. P. Adams.

**ATLANTA, GA.**—West End & Atlantic R.R. Co. 2m, 4-8½ g, 20 lb r, 6 c, 34 mu. Pres. J. D. Turner, V. Pres. I. L. Langston, Sec. & Treas. B. H. Brumhead, Man. & Purch. Agt. Jno. S. Brumhead.

**ATLANTA, GA.**—Atlanta St. R.R. Co.

**ATLANTA, GA.**—Gate City St. R.R. Co. 2½ m, 4-8½ g, 16 lb r, 7 c, 26 h. Pres. L. B. Nelson, V. Pres. L. DeGivie, Sec. & Treas. John Stephens, Solicitor, A. Remharat.

**ATLANTA, GA.**—Metropolitan St. R.R. Co.

**ATLANTIC, N. J.**—Atlantic City Ry. Co.

**AUBURN, N. Y.**—Auburn & Wasco Lake R.R. Co. 1½ m, 4-3½ g, 28-30 lb r, 3c, 12 h. Pres. D. M. Osborne, Sec. & Treas. C. B. Koster, Supt. B. F. Andrews.

**AUBURN, N. Y.**—East Genesee & Seward Ave. Ry. Co. 1½ m, 4-8½ g, 30 lb r, 6 c, 25 h. Pres. David M. Osborne, Sec. & Treas. C. B. Fosters, Supt. B. F. Andrews.

**AUGUSTA, GA.**—Augusta & Somerville R.R. Co.

**AURORA, ILL.**—Aurora City Ry. Co. 5 m, 4-8½ g, 28 lb r, 7 c, 10 h, 30 mu. Pres. H. H. Evans, V. Pres. S. W. Thatcher, Sec. A. J. Hopkins, Treas. E. W. Truth, Supt. J. B. Chattee.

**BABYLON, N. Y.**—Babylon Horse R.R. Co. 1¼ m, — g, — lb r, 2 c, 3 h. Pres. W. F. Norton.

**BALTIMORE, MD.**—Baltimore & Powhatan Ry. Co. 6 m, 5-4½ g, 4 c, 17 h. Pres. & Treas. E. D. Freeman, Sec. R. B. Clark, Supt. I. M. Ketricik.

**BALTIMORE, MD.**—Baltimore City Pass. Ry. Co. 40 m, 5-4½ g, 46 lb r, 15 c, 1000 h. Pres. Oden Bowie, Treas. John Bolgian, Sec. S. L. Bridge.

**BALTIMORE, MD.**—Baltimore Union Pass. Ry. Co.

**BALTIMORE, MD.**—Baltimore & Catonsville Ry. Co.

**BALTIMORE, MD.**—Baltimore & Halls Spring R.R. Co.

**BALTIMORE, MD.**—Baltimore & Pimlico & Pikesville R.R. Co.

**CENTRAL, RY. CO.**—Baltimore & Pikesville R.R. Co. 5½ m, 5-6 g, 40 lb r, 22 c, 180 h. Pres. Peter Thompson, Sec. & Treas. Walter Blakistone.

**CITIZEN'S RY. CO.**—Baltimore & Pikesville R.R. Co. 20 m, 5-4½ g, 46 lb r, 34 c, 360 h. Pres. Jos. S. Hagarty, Treas. Wm. S. Hammersley, Supt. C. S. Speed.

**MONUMENTAL CITY RY. CO.**

**NORTH BALTIMORE PASSENGER RY. CO.**

**PEOPLE'S PASS. RY. CO.**—Baltimore & Pikesville R.R. Co. 6½ m, 5-4½ g, 42-45 lb r, 30 c, 200 h. Pres. R. E. Hamilton, Treas. Gustavus Ober, Sec., Supt. & Pur. Agt. Wm. A. House, Jr. Office, Fort Ave. & Johnson St. Soon move to Druid Hill Ave. York Road R.R. Co.

**BATTLE CREEK, MICH.**—Battle Creek Ry. Co. 5 m, 3-6 g, 28 lb r, 8 c, 18 h, 3 mu. Pres. Geo. Det- J. White, V. Pres. H. H. Brown, Sec. Chas. Thomas, Supt. John A. White, Gen. Man. J. W. Hahn.

**BAY CITY, MICH.**—Bay City St. Ry. Co. 7½ m, 4-8½ g, 18 lb r, 13 c, 35 h. Pres. James Clements, Treas. Wm. Clements, Sec. Edgar A. Cooley.

**BEAVER FALLS, PA.**—Beaver Valley St. Ry. Co. 3-1-10 m, 5 c, 21 h. Pres. M. L. Knight, Sec. & Treas. J. F. Merriman, Supt. of Construction, J. C. Whittle.

**BELLAIRE, O.**—Bellaire St. R.R. Co.

**BELLEVEILLE, ILL.**—Citizen's Horse Ry. Co.

**BELLEVEILLE, ONT., CAN.**—Bellville St. R.R. Co.

**BEREA, O.**—Berea St. Ry. Co. 1½ m, 3-6 g, 28 lb r, 2 c, 2 h. Pres. C. W. D. Miller, V. Pres. T. Chinchward, Sec. & Treas. A. H. Pomeroy, Supt. A. W. Bishop.

**BINGHAMTON, N. Y.**—Washington Street & State Asylum R.R. Co. 4½ m, 4 g, 16-25 lb r, 13 c, 23 h. Pres. F. H. Meagley, V. Pres. Geo. Whitney, Sec. C. O. Root, Treas. F. E. Ross.

**BINGHAMTON, N. Y.**—Binghamton Central R.R. Co. 3½ m (2½ laid), 3 g, 28 lb r, 6 c (not in operation). Pres. Geo. L. Crandall, V. Pres. Nelson Stow, Sec. & Supt. Chas. O. Root, Treas. H. J. Kneeland.

Binghamton & Port Dickinson R.R. Co. 5 m, 4-8½ g, 20-30 lb r, — c, — h. Pres. Harvey Westcott, Sec. & Treas. G. M. Harris, Supt. N. L. Osborn. (Leased to Mr. Osborn).

Main, Court & Chenango St. R.R. 5 m, 4-8 g, 40 lb r, 10 c, 25 h. Supt. & Lessee, N. L. Osborn.  
**BIRMINGHAM, ALA.**—Birmingham St. Ry. Co. 3½ m, 4-8 g, 16 lb r, 4 c, 12 m. Pres. B. F. Roden, Sec. & Treas. J. H. Williams.

**BLOOMFIELD, N. J.**—Newark & Bloomfield R. R.

**BLOOMINGTON, ILL.**—Bloomington & Normal Horse Ry. Co.

**BOONE, IA.**—Boone & Boonsboro St. Ry. Co. 1½ m, 3 g, 20 lb r, 3 c, 10 h. Pres. L. W. Reynolds, Treas. I. J. Hodges, Sec. & Supt. A. B. Hodges.

**BOONSBORO, IA.**—Twin City & Des Moines River Motor St. Ry. Co.

**BOSTON, MASS.**—Highland St. Ry. Co. 19 m, 4-8½ g, 50 lb r, 187 c, 925 h. Pres. Moody Merrill, Clerk R. B. Fairbairn, Treas. Samuel Little, Supt. J. E. Rugg.  
Lynn & Boston. 3¼ m, 4-8½ g, 25-48 lb r, 114 c, 514 h. Pres. Amos F. Bredt, Treas. & Sec. E. Francis Oliver, Supt. Edwin C. Foster.  
Metropolitan R. R. Co. 80 m, 4-8 g, 50 lb r, 700 c, 3,600 h. Pres. C. A. Richards, Sec. H. R. Harding, Treas. Chas. Boardman. Office, 16 Kilby St.  
Middlesex R.R. Co. 26 m, 4-8½ g, 50 lb r, 150 c, 700 h. Pres. Chas. E. Powers, Treas. & Supt. John H. Studley. Address, 27 Tremont Row, Boston.  
So. Boston Ry. Co. 13 m, 4-8½ g, 42-50 lb r, 193 c, 900 h. Pres. Chas. H. Hersey, V. Pres. Jas. C. Davis, Sec. & Treas. Wm. Reed, Supt. Daniel Coolidge.

**BRADFORD, PA.**—Bradford & Kendall R.R. Co. 1½ m, 4-8½ g, 38 lb r, 3 c, 4 h. Pres. James Brodey, Sec. N. D. Parsons, Gen. Man. & Supt. Enos Parsons.

**BRIDGE, CONN.**—The Bridgeport Horse R.R. Co. 4-8½ g, 42 lb r, 14 c, 70 h. Pres. Albert Eamer, Sec. & Treas. F. Hurd, Supt. B. F. Lashar.

**BROCKTON, MASS.**—Brockton St. Ry. Co. 3½ m, 24 c, 97 h. Pres. W. W. Cross, Treas. & Sec. Z. C. Keith, Supt. H. B. Rogers.

**BROOKLYN, N. Y.**—The Atlantic Avenue R.R. Co. of Brooklyn. 24½ m, 4-8 g, 60 lb r, 244 c, 882 h. Pres. William Richardson, Sec. W. J. Richardson, Treas. Newburg H. Frost.

**BROOKLYN, N. Y.**—Broadway R.R. Co. 10-1-10 m, 4-8½ g, 45-50-60 lb r, 166 c, 657 h. Pres. W. H. Husted, V. Pres. Edwin Beers, Sec. & Treas. Robert Sealey, Supt. Joshua Crandall.

**BROOKLYN, N. Y.**—Brooklyn Cross Town R.R. Co. 8 m, 4-8½ g, 40-60 lb r, 72 c, 400 h. Pres. Henry W. Slocum, V. Pres. Ezra B. Utile, Sec. & Treas. John R. Connor, Supt. D. W. Sullivan.

**BROOKLYN, N. Y.**—Bushwick R.R. Co. 20 m, 4-8½ g, 45-50-60 lb r, 172 c, 600 h. Pres. Frank Cromwell, V. Pres. Wm. H. Husted, Treas. & Sec. S. D. Hallowell, Supt. Wm. M. Morrison.

**BROOKLYN, N. Y.**—The Brooklyn, Bushwick & Queens County R.R. Co. 6 m, 4-8½ g, 42-47 lb r, 41 c, 117 h. Pres. Richard H. Green, V. Pres. James W. Ellwell, 59 South St. N. Y. Sec. John D. Kirwell, Treas. Wm. W. Greene.

**BROOKLYN, N. Y.**—Brooklyn City R.R. Co. 44 m, 4-8½ g, 60 lb r, 761 c, 3,045 h. Pres. William H. Hazzard, V. Pres. William M. Thomas, Sec. & Treas. Daniel F. Lewis, Asst. Sec. Francis E. Whigley.

**BROOKLYN, N. Y.**—Brooklyn City & Newtown R.R. Co. 11 m, 4-8½ g, 45-60 lb r, 128 c, 419 h. Pres. Louis Fitzgerald, N. Y. City, Sec. & Treas. H. A. Schuz, Supt. H. W. Bush.

**BROOKLYN, N. Y.**—Calvary emetery, Greenpoint & Brooklyn Ry. Co. Coney Island and Brooklyn R.R. Co. 11-2-5 m, 45 lb r, 4-8½ g, 103 c, 316 h. Pres. James Jourdan, Sec. Ed. F. Drayton, Supt. William Farrell.

**BROOKLYN, N. Y.**—Coney Island, Sheephead Bay & Ocean Avenue R.R. Co. Pres. A. A. McClemer, V. Pres. Daniel Mone, Sec. John McMahon, Sheephead Bay, Treas. Horace Valkuliy.

**BROOKLYN, N. Y.**—Cross-town Line, Hamilton Ferry to Bridge. Grand St. & Newtown R.R. Co. 8½ m, 4-8½ g, 45-50 lb r, 72 c, 250 h. Pres. Martin Joost, Sec. & Treas. Wm. E. Horwill, Supt. Walter G. Howey.

**BROOKLYN, N. Y.**—Grand Street, Prospect Park & Flatbush R.R. Co. 4½ m, 4-8½ g, 50 lb r, 75 c, 244 h. Pres. Louis Fitzgerald, 120 Broadway, N. Y., Sec. & Treas. Duncan B. Cannon, Supt. Jno. L. Helms.

**BROOKLYN, N. Y.**—Greenpoint & Lorimer St. Prospect Park & Coney Island R.R. Co. 4-7-10 m, 45-50 lb r, 4-8½ g, 69 c, 214 h. Pres. A. R. Culver, Treas. A. C. Washington, Sec. George H. Smith, Eng. Supt. R. Schermerhorn, Supt. Robert Attlesey.

**BROOKLYN, N. Y.**—Prospect Park & Flatbush R.R. Co. 1½ m, 4-8½ g, 34 lb r, 70 c, 260 h. Pres. Loftis Wood, Sec. & Treas. Sam'l Parkhill, Supt. Loftis Wood.

**BROOKLYN, N. Y.**—South Brooklyn Central R.R. Co. 7 m (4½ m laid), 4-8½ g, 60 lb r, 42 c, 192 h. Pres. Wm. Richardson, Sec. Wm. J. Richardson, Treas. N. H. Frost, Supt. James Huddy.

**BROOKLYN, N. Y.**—The New Williamsburgh & Flatbush R. R. Co. 6½ m, 4-8½ g, 47-50 lb r, 74 c, 255 h. Pres. Geo. W. Van Allen, 54 Ann St. New York, Sec. W. B. Waitt, 34th St. & 9th Ave. New York, Treas. C. B. Cottrell, 8 Spruce St., N. Y. City, Supt. Chas. E. Harris, Nost-rand Ave. & Carroll St., Brooklyn.

**BROOKLYN, N. Y.**—The Union Railway Co. of the City of Brooklyn (not in operation).

**BROOKLYN, N. Y.**—Van Brunt St. & Erie Basin R.R. Co. 1½ m, 4-8½ g, 45 lb r, 7 c, 24 h. Pres. John Cunningham, Sec. & Treas. Edmund Terry.

**BRUNSWICK, GA.**—Brunswick St. R.R. Co.

**BUFFALO, ILL.**—See Mechanicsburg, Ill.

**BUFFALO, N. Y.**—Buffalo St. R.R. Co. 17½ m, 4-8½ g, 50 lb r, 96 c, 510 h. Pres. Henry M. Watson, V. Pres. P. P. Pratt, Sec. S. S. Spaulding, Treas. W. H. Watson, Supt. Edward Edwards.

**BUFFALO, N. Y.**—Buffalo East Side St. R.R. Co. 24-4-5 m, 4-8½ g, 42 lb r, 47 c, 218 h. Pres. S. S. Spaulding, V. Pres. Joseph Churchard, Sec. H. M. Watson, Treas. W. H. Watson, Supt. Edward Edwards.

**BURLINGTON, IA.**—Burlington City R.R. Co. 2½ m, 4-8½ g, 22 lb r, 9 c, 30 h. Pres. John Patterson, Sec. & Man. C. T. Patterson.

**BURLINGTON, IA.**—Union St. Ry. Co.

**CAIRO, ILL.**—Cairo St. R.R. Co.

**CAMBRIDGE, MASS.**—Cambridge R.R. Co. 43 m, 4-8½ g, 50 lb r, 245 c, 1,410 h. Pres. Prentiss Cummings, Treas. & Clerk F. T. Stevens, Exec. Com. I.

M. Simpson, P. Cummings, O. S. Brown, Clerk of Directors, O. S. Brown, Supt. Wm. A. Bancroft.  
Charles River St. Ry. Co. 10-4-5 m, 2-8½ g, 50 lb r, 50 c, 330 h. Pres. Chas. E. Raymond, Corp. Clerk C. E. Harden, Treas. Daniel U. Chamberlain, Supt. John N. Akerman.

**CAMDEN, N. J.**—Camden & Atlantic St. Ry. Camden Horse R.R. Co. 9 m, 5-1 g, 35-47 lb r, 26 c, 85 h. Pres. Thos. A. Wilson, Sec. Wilbur F. Rose, Treas. & Supt. John Hood.

**CANTON, O.**—Canton St. R.R. Co. (new road)

**CAPE MAY, N. J.**—Cape May & Schellenger Landing Horse R.R.

**CARTHAGE, MO.**

**CEDAR RAPIDS, IA.**—Cedar Rapids & Marion St. Pass. Ry. Co.

**CHAMPAIGN, ILL.**—Champaign R.R. Co. Urbana & Champaign St. R.R. Co. (See Urbana.)

**CHARLESTON, S. C.**—Charleston City Ry. Co. 8½ m, 4-8½ g, 38-42 lb r, 22 c, 84 h. Pres. Jno. S. Riggs, Treas. J. Van Edwards, Sec. Frank Whelden, Supt. Jno. Mohrhanoff.

**CHARLESTON, S. C.**—Enterprise R.R. Co. 12 m, 5 g, 42 lb r, 14 c, 51 h. Pres. A. F. Ravenel, Sec. & Treas. U. E. Hayne, Supt. T. W. Passallaigere.

**CHATTANOOGA, TENN.**—Chattanooga St. R. R. Co. 2½ m, 4-8½ g, 16-25 lb r, 8 c, 50 h. Pres. J. H. Warner, V. Pres. C. R. Gaskill, Supt. A. B. Wingfield.

**CHESTER, PA.**—Chester St. Ry. Co. 5½ m, 5-2½ g, 12 c, 70 h. Pres. Richard Peters, Jr., Solicitor, Geo. B. Lindsay, Treas. Sam'l A. Dyer, Sec. E. M. Cornell.

**CHICAGO, ILL.**—Chicago City Ry. Co. 87 m, 4-8½ g, 45 lb r, 567 c, 1,416 h. cable doing work of 2,500 h. Pres. C. B. Holmes, Sec. H. H. Windsor, Treas. T. C. Pennington, Supt. C. B. Holmes.

**CHICAGO, ILL.**—Chicago West Division Ry. Co. 40 m, 4-8½ g, 40 lb r, 620 c, 3,425 h. Pres. J. R. Jones, Sec. George L. Webb, Supt. Jas. K. Lake.

**CHICAGO, ILL.**—Chicago & Hyde Park St. — m, — g, — lb r, — c, — h. Pres. Douglas S. Clarke.

**CHICAGO, ILL.**—North Chicago City Ry. Co. 35 m, 4-8½ g, 45 lb r, 316 c, 1,700 h. Pres. & Gen. Supt. V. C. Turner, V. Pres. Jacob Rehn, Sec. & Treas. Ithram Crawford, Supt. of Track & Construction, Augustine W. Wright, Asst. Supt. Fred L. Thredy, Supt. Horse Dept. Robt. Atkins, Purch. Agt. John W. Roach, Master Mechanic J. Miller.

**CHILLICOTHE, O.**—Chillicothe St. R.R. Co. 1½ m, 3 g, 16 lb r, 7 c, 10 h. Pres. E. P. Safford, Sec. A. E. Wenis, Treas. William Polanel, Supt. Ewel McMartin.

**CINCINNATI, O.**—Cincinnati Inclined Plane Ry. Co. 3 m, 5-2½ g, 43 lb r, 24 c, 150 h. Pres. Geo. A. Smith, Sec. & Supt. James M. Doherty, Treas. Jos. S. Hill.

**CINCINNATI, O.**—Cincinnati St. Ry. Co. 98 m, 5-2½ g, 43 lb r, 254 c, 1,815 h. Pres. John Kilgour, Sec. & Aud. James A. Collins, Treas. R. A. Dunlap, Con. Eng. F. R. Weizenecker, Supt. John Harris.

**CINCINNATI, O.**—Cincinnati & Mount Auburn R.R. Co.

**CINCINNATI, O.**—Columbia & Cincinnati St. R.R. Co. 3½ m, 3 g, 35 lb r, 3 c, 6 dummy c. Pres. C. H. Kilgour, V. Pres. John Kilgour, Treas. B. F. Brannan, Sec. A. H. Meier, Mt. Lookout, O. Supt. J. J. Henderson, Mt. Lookout, O.

**CINCINNATI, O.**—Mt. Adams & Eden Park Inclined R.R. Co. 3½ m, 5-2½ g, 42 lb r, 40 c, 320 h. Pres. & Treas. J. P. Kerper, Sec. J. R. Murdoch, Supt. Chas. Whiffin.

**CINCINNATI, O.**—So. Covington & Cincinnati. (See Covington, Ky.)

**CLEVELAND, O.**—The Brooklyn St. R.R. Co. 8½ m, 4½ g, 52 lb r, 66 c, 375 h. Pres. Tom L. Johnson, V. Pres. A. J. Moxham, Sec. J. B. Hoefgen, Treas. V. John McConell, Supt. A. L. Johnson.

**CLEVELAND, O.**—Broadway & Newburg St. R.R. Co. 6 m, 4-8½ g, 10 c, 160 h. Pres. & Supt. Joseph Stanley, V. Pres. Sam'l Andrews, Sec. & Treas. E. Fowler.

**CLEVELAND, O.**—Superior St. R.R. Co. 15 m, 4-8½ g, 45 lb r, 46 c, 225 h. Pres. Frank De H. Robinson, V. Pres. John Koch, Sec. & Supt. M. S. Robinson, Jr.

**CLEVELAND, O.**—The East Cleveland R.R. Co. 20 m, 4-8½ g, 35-40 lb r, 92 c, 450 h. I electric motor. Pres. A. Everett, V. Pres. Chas. Wason, Sec. & Treas. H. A. Everett, Supt. E. Duty. Offices, 1154 & 1158 Euclid Ave.

**CLEVELAND, O.**—Woodland Avenue & West Side St. R.R. Co. 17 m, 4-8½ g, 43 lb r, 100 c, 550 h. Pres. M. A. Hanna, V. Pres. C. F. Emery, Sec. J. B. Hanna, Gen. Supt. George G. Mulhen.

**CLEVELAND, O.**—South Side St. Ry. Co.

**CLEVELAND, O.**—St. Clair Street Ry. Co.

**CLEVELAND, O.**—West Side R.R. Co.

**CLINTON, IA.**—Lyons & Clinton Horse R.R. Co. (See Lyons.)

**COLUMBUS, GA.**—Columbus St. R.R. Co. 3 m, 4-8½ g, 16 lb r, 6 c, 25 h. Pres. Cliff B. Grimes, Sec. L. G. Schuessler, Treas. N. N. Curtis, Supt. J. A. Gabbough.

**COLUMBUS, O.**—Columbus Consolidated St. R.R. Co. 19 m, 5-2 g, 30-46 lb r, 83 c, 350 h. Pres. A. Rodgers, V. Pres. H. T. Chittenden, Sec. & Treas. E. K. Stewart, Supt. J. H. Atcherson.

**COLUMBUS, O.**—Glenwood & Greenlawn St. R.R. Co. 4½ m, 3-6 g, 24 lb r, 9 c, 25 c. Pres. A. D. Rodgers, V. Pres. B. S. Brown, Sec. R. S. Ro kley, Treas. S. S. Rickley, Supt. Jonas Wilcox.

**CONCORD, N. H.**—Concord Horse R.R. Co. 8 m, 3 g, 30-33 lb r, 10 c, 14 h, 2 steam motors. Pres. Moses Humphrey, Treas. H. J. Criffin, Clerk E. C. Hoag.

**CORTLAND, N. Y.**—Cortland & Homer Horse Ry. Co. 4 m (2½ laid), 4-8½ g, 25-30 lb r. Pres. Chas. H. Garrison, Troy, N. Y., Sec. J. M. Milne, Treas. S. E. Welch, Supt. S. E. Welch. (Leased to D. N. Miller.)

**COUNCIL BLUFFS, IA.**—Council Bluffs St. R.R. Co.

**COVINGTON, KY.**—So. Covington & Cincinnati St. Ry. Co. 17½ m, 5-2½ g, 43 lb r, 46 c, 296 h. Pres. E. F. Abbott, Sec. S. C. Buntou, Treas. G. M. Abbott.

**DALLAS, TEX.**—Dallas St. Ry. Co. 4½ m, 4-8½ g, 20-38 lb r, 12 c, 4 h, 72 mu. Pres. Wm. J. Keller, Sec. Harry Keller, Supt. C. E. Keller.

**DALLAS, TEX.**—Commerce & Way St. R.R.

**DANVILLE, ILL.**—Citizens' St. Ry. Co. 4 m, 4 g, 20 lb r, 7 c, 35 mu. Pres. Wm. I. Cannon, V. Pres. & Gen. Man. Wm. Stewart, Sec. & Treas. Adam P. Samuel.

**DAVENPORT, IA.**—Davenport Central St. R.R. 2½ m, 4-8½ g, 20 lb r, 10 c, 30 h. Pres. James Grant,

Sec. O. S. McNeil, Treas. S. F. Smith, Supt. R. A. McGugin.  
 Brady St. Ry. Co.  
 Davenport City Ry. Co.  
**DAYTON, KY.**—Newport & Dayton St. Ry. Co. 2 m, 5-2½ g, 41 lb r, 9 c, 36 h. Pres. & Supt. W. W. Bean.  
**DAYTON, O.**—Dayton St. R.R. Co. 3½ m, 4-8½ g, 44 lb r, 23 c, 66 h. Pres. J. W. Stoddard, V. Pres. H. S. Williams, Sec. C. B. Clegg, Supt. A. W. Anderson.  
 Oakwood St. Ry. Co. 3-13 m, 4-8½ g, 38 lb r, 13 c, 60 h. Pres. Charles B. Clegg, Sec. M. P. Moore, Supt. Wm. Davis.  
 The Wayne & Fifth St. R.R. Co. 3½ m, 4-8½ g, 34-38 lb r, 5 c, 30 h. Pr. S. Geo. M. Shaw, Sec. & Treas. Eugene Winchet, Supt. N. Routzahn.  
**DECATUR, ILL.**—Decatur Horse Ry. Co.  
 Citizens' Street R.R. Co. 2 m, 4-8½ g, 20 lb T r, 7 c, 47 h & mu. Pres. D. S. Shellabarger, Sec., Treas. & Supt. A. E. Kinney.  
**DEERING, ME.**—See Portland.  
**DENISON, TEX.**—Denison St. Ry. Co. 3 m, 3-6 g, 16 lb r, 5 c, 22 mu. Pres. C. A. Waterhouse, Supt. S. A. Robinson.  
**DENVER, COL.**—Denver City Ry. Co. 16 m, 3-6 g, 16 lb r, 5 c, 250 h. Pres. Geo. H. Holt, 10 Wall St., New York City, Sec. G. D. L'huillier, 10 Wall St., New York City, Treas. & Man. G. E. Randolph.  
**DES MOINES, IA.**—Des Moines St. Ry. Co. 10 m, 3 g, 25-30-38-52 lb r, 18 c, 100 h. Pres. M. P. Turner, Sec. M. A. Turner.  
 Des Moines & Sebastopol St. Ry. Co.  
**DETROIT, MICH.**—Fort Wayne & Elmwood Ry. Co. 6 m, 4-8½ g, 45 lb r, 30 c, 180 h. Pres. H. B. Brown, V. Pres. Edward Kanter, Treas. George B. Pease, Sec. N. W. Goodwin, Supt. Geo. S. Hazard.  
 Detroit City Ry. Co. 30 m, 4-8½ g, 40-43½ lb r, 130 c, 700 h. Includes Jefferson Ave. line, Woodward Ave. line, Michigan Ave. line, Gratiot Ave. line, Brush St. line, Cass Ave. line, Congress & Baker line. Pres. Sidney D. Miller, Treas. George Hendrie, Sec. James Heugh, Gen. Supt. Robert Bell, Mast. Mech. John Willis.  
 Grand River St. Ry. Co. 2¼ m, 4-8½ g, 43 lb r, 13 c, 110 h. Pres. & Treas. Jos. Dailey, Sec. J. W. Dailey, Supt. C. M. Dailey.  
**DOVER, N. H.**—Dover Horse R.R. Co. 2-25 m, 3 g, 30 lb r, 4 c, 14 h. Directors, Z. S. Wallingford, Chas. H. Sawyer, Jas. E. Lothrop, C. W. Wiggin, Harrison Haley, Frank Williams, Cyrus Littlefield, Treas. Cyrus Littlefield.  
**DUBUQUE, IA.**—Dubuque St. R.R. 5 m, 4-8½ g, 21 c, 45 h. Pres. J. A. Rhonberg, Sec. & Treas. B. E. Linehan, Supt. J. J. Linehan.  
**DULUTH, MINN.**—Duluth St. Ry. Co. 3 m, 3-6 g, 30 lb r, 6 c, 7 h, 31 mu. Pres. A. S. Chase, V. Pres. O. P. Stearns, Sec. & Treas. L. Mendenhall, Supt. & Pur. Agt. W. T. Hoopes.  
**EAST OAKLAND, CAL.**—Oakland, Brooklyn & Fruitvale R.R. Co.  
**EAST SAGINAW, MICH.**—Street R. R. Co. of East Saginaw. — m, 4-8½ g, 30 lb r, 14 c, 35 h. Pres. & Supt. W. J. Barton, Sec. W. H. Hark, Treas. J. B. Peter.  
**EAST ST. LOUIS, ILL.**—East St. Louis St. R.R. Co.  
**EASTON, PA.**—The Easton & So. Easton Passenger Ry. Co. 1½ m, 5-2½ g, 45 lb r, 4 c, 20 h. Pres. H. A. Sage, Sec. & Treas. H. W. Cooley, Supt. Elisha Burwell, So. Easton.  
 The West End Passenger Ry. Co. 1½ m, 5-2½ g, 45 lb r, 6 c, 20 h. Pres. H. A. Sage, Sec. & Treas. H. W. Cooley, Supt. Samuel Berry.  
**EAU CLAIRE, WIS.**—Eau Claire City Ry. Co.  
**ELGIN, ILL.**—Elgin City Ry. Co. 2 c. Pres. Sec. Treas. Supt. & Owner, B. C. Payne.  
**ELIZABETH, N. J.**—Elizabeth & Newark Horse R.R. Co. 14 m, 5-2½ g, 4-10½ g, 30 lb r, 24 c, 74 h. Pres. & Treas. Jacob Davis, Sec. & Supt. John F. Pritchard.  
**ELKHART, IND.**—Elkhart City R.R. Co.  
**ELMIRA, N. Y.**—The Elmira & Horseheads Ry. Co. 9-2-3 m, 4-8½ g, 25-30-40 lb r, 18 c, 34 h. Pres. & Treas. George M. Diven, V. Pres. Geo. W. Hoffman, Sec. Wm. S. Kershner, Supt. Henry C. Silsbee.  
**EL PASO, TEX.**—El Paso St. Ry. Co. 2¼ m, 4-8½ g, 20 lb r, 8 c, 25 h. Pres. G. B. Zimpelman, V. Pres. A. Krookauer, Treas. F. Magoffice, Sec. & Supt. I. A. Tays.  
**EMPORIA, KAN.**—Emporia City Ry. Co. 3½ m, 5 g, 20 lb r, 6 c, 23 m. Pres. Van R. Holmes, Treas. A. F. Crowe, Sec. & Man. J. D. Holden.  
**ENTERPRISE, MISS.**—Enterprise St. Ry. Co. 1¼ m, 3-6 g, 24 lb r, 2 c, 6 h. Pres. John Kampe, V. Pres. E. B. Gaston, Sec. & Treas. Jno. Gaston.  
**ERIE, PA.**—Erie City Passenger Ry. Co. 5 m, 4-8½ g, 30-40 lb r, 17 c, 70 h. Pres. Wm. W. Reid, Treas. J. C. Spencer, Sec. A. L. Letteli, Supt. Jacob Berst.  
**EUREKA SPRINGS, ARK.**—Eureka Springs City Ry. Co.  
**EVANSVILLE, IND.**—Evansville St. Ry. Co. 12 m, 4-8 g, 28 lb r, 31 c, 190 mu. Pres. John Gilbert, Sec. P. W. Raleigh, Treas. John Gilbert, Supt. W. Bahr.  
**FALL RIVER, MASS.**—Globe St. Ry. Co. 12 m, 4-8½ g, 40-46-47 lb r, 40 c, 160 h. Pres. Frank S. Stevens, Treas. F. W. Brightman, Sec. M. G. B. Swift, Supt. John H. Bowker, Jr.  
**FORT SCOTT, KAN.**—Bourbon County St. Ry. Co. 1 m, 4 g, 22 lb r, 2 c, 4 m. Pres. Isaac Stadden, V. Pres. Benj. Files, Sec. Wm. Perry, Treas. J. H. Randolph.  
**FORT SMITH, ARK.**—Fort Smith St. Ry. Co. 2 m, 3-6 g, 16-28 lb r, 5 c, 16 h. Pres. Sam'l M. Loud, Sec. & Treas. Geo. T. Sparks.  
**FORT WAYNE, IND.**—Citizens' St. R.R. Co.  
**FORT WORTH, TEX.**—Fort Worth St. Ry. Co. 7½ m, 4 g, 25-38 lb r, 16 c, 73 m. Pres. K. M. Vanzandt, Treas. W. A. Hoffman, Acting Sec. & Gen. Man. S. Mims.  
**FRANKFORT, N. Y.**—Frankfort & Ilion Street Ry. Co. 2½ m, 5 g, 4 c. Pres. A. C. McGowan, Frankfort, Sec. D. Lewis, Ilion, Treas. P. Remington, Ilion, Supt. Fredk. Gates, Frankfort.  
**FREDONIA, N. Y.**—Dunkirk & Fredonia R.R. Co. 3½ m, 4-10 g, 25 lb r, 5 c, 8 h. Pres. Wm. M. McClinty, Sec. & Treas. M. N. Fenner, Supt. Z. Elmer, Wheelock.  
**GAINSVILLE, FLA.**—Gainsville St. Ry. Co. 2¼ m, 3-6 g, 9 lb r, 10 c, 36 h. Pres. Robert Carson, Sec. & Treas. F. Sargent, Man. William Wilson

**KNOXVILLE, TENN.**—Knoxville St. Ry. Co. 2 m, 4-8½ g, 22 lb r, 5 c, 2 hacks, 30 h. Pres. W. W. Woodruff, Sec., Treas. & Supt. T. L. Beaman.  
**LACONIA, N. H.**—Laconia & Lake Village Horse R.R. Co. 2 m, 3 g, 34 lb r, 5 c, 17 h. Pres. A. G. Folsom, Treas. Edmund Little, Man. Bela S. Kennison.  
**LA CROSSE, WIS.**—City Ry. Co. of La Crosse. 2¼ m, 4-9 g, 24 lb r, 5 c, 16 h, 3 mu. Pres. Geo. F. Gund, V. Pres. B. E. Edwards, Sec. Mills Tourtelotte, Treas. Fred Tillman, Gen. Supt. Joseph Tuteur, Supt. Geo. F. Smith.  
 La Crosse St. Ry. Co.  
**LA FAYETTE, IND.**—LaFayette St. Ry. 2¼ m, 4-8½ g, 25 lb r, 6 c, 38 h. Pres. E. B. Caldwell, LaFayette, Sec. & Treas. E. G. Jones, Decatur, Ill., Supt. F. Greer, LaFayette.  
**LAKE CITY, FLA.**—Lake City St. Ry. Co.  
**LAMPASAS SPRINGS, TEX.**—Lampasas City Ry. Co. 3¼ m, 4-8½ g, 22 lb r, 6 c, 15 h. [Owned by Mrs. L. K. Snodgrass.] Gen. Man. Geo. M. Snodgrass.  
**LANCASTER, PA.**—Lancaster & Millerville St. Ry. Co.  
 Lancaster City St. Ry. Co.  
**LARCHMONT, N. Y.**—Larchmont Manor Co. 1 m, 4-8 g, 25 lb r, 2 c, 8 h. Pres. C. H. Murray, Treas. S. H. French, 38 East Fourteenth St., N. Y. City.  
**LAWRENCE, KAN.**—Lawrence Transportation Co. 3½ m, 4-1 g, 38 lb r, 7 c, 30 h. Pres. H. Tisdale, Sec. W. H. Bangs.  
**LAWRENCE, MASS.**—Merrimack Valley Horse R.R. Co. 5-4-5 m, 4-8½ g, 48 lb r, 20 c, 70 h. Pres. Wm. A. Russell, V. Pres. James Walton, Methuen, Clerk & Treas. James C. Eaton, Supt. A. N. Kimball, Lawrence.  
**LEWISTON, ME.**—Lewiston & Auburn Horse R.R. Co. 7½ m, 4-8½ g, 32 lb r, 16 c, 45 h. Pres. Frank W. Dana, Lewiston, Clerk, H. C. Little, Lewiston, Treas. H. C. Packard, Auburn, Supt. E. P. Stinchfield, Auburn.  
**LEXINGTON, KY.**—Lexington City Ry. Co. 5 m, 4-10 g, 20 lb r, 20 c, 85 h. Pres. John Cross, V. Pres. C. R. Diver, Sec. & Supt. Bert. Cross.  
**LEXINGTON, MO.**—Lexington St. Ry. Co.  
**LIMA, O.**—Lima St. Ry. Co.  
**LINCOLN, NEB.**—Capital City Ry. Co. 3 m, — g, — lb r, 5 c, — h. Pres. E. B. Durfee, Sec. & Supt. H. B. Durfee.  
**LITTLE ROCK, ARK.**—Little Rock St. Ry. Co. Citizens' St. Ry. Co. 4½ m, 4-10 g, 20 lb r, 22 c, 80 h. Pres. John Cross, Sec. & Treas. F. C. Reed, Supt. C. R. Diver.  
 Hot Springs St. Ry. Co.  
**LOGANSPORT, IND.**—Logansport Ry. Co. 2 m, 4 g, 23 lb r, 6 c, 29 mu. Pres. Frank G. Jaques, Sec. M. Jaques, Supt. Wm. P. Jaques, Office, Urbana, Ill.  
**LONDON, CAN.**—London St. R.R. Co. 3 m, 4-8½ g, 30 lb r, 12 c, 30 h. Pres. V. Cronga, Sec. Jas. H. Flock, Supt. Henry Thos. Smith.  
**LONG ISLAND CITY, N. Y.**—Stelway & Hunter's Point R.R. Co. 26½ m, 4-8½ g, 47 lb r, 60 c, 150 h. Pres. Wm. Stelway, Stelway Hall, N. Y. City. V. Pres. Henry A. Cassebeer, Jr., Stelway, P. O., Long Island City, N. Y. Sec. & Treas. Chas. F. Tratbar, Stelway Hall, N. Y. City.  
 Dutch Kills & Hunter's Point R.R. — m, — g, — lb r, — c, — h. Pres. R. J. Gleason.  
 Long Island City & Newtown Ry. Co. 3 m, 4-8½ g, 45-55 lb r, 25 c, 60 h. Pres. Isaac Buchanan, N. Y. City, Sec. Geo. S. Crawford, Brooklyn, N. Y., Treas. Patrick J. Gleason, Supt. Michael Conway.  
**LONGVIEW, TEX.**—Longview & Junction St. Ry. ¾ m, 3-6 g, 2 c, 4 h. Pres. F. T. Rembert, Sec. R. B. Levy, Treas. F. L. Whaley, Supt. C. W. Booth.  
**LOS ANGELES, CAL.**—Boyle Heights R.R. Co. Central R.R. Co. and the Sixth & San Fernando St. R.R. Co. 7 m, 3-6 g, 16 lb r, 13 c, — h. Pres. E. T. Spencer, Sec. F. X. Palmer, Supt. J. A. Fairchild.  
 City R.R. of Los Angeles. 4½ m, 4-8½ g, 36 lb r, 9 c, 75 h. Pres. I. M. Hellman, V. Pres. V. J. Broditch, Sec. John O. Wheeler, Supt. W. H. Hawks.  
 Los Angeles & Aliso Ave. St. R.R. Co.  
 Main St. & Agricultural Park R.R.  
**LOUISVILLE, KY.**—Kentucky St. Ry. Co. 5 m, 5-2 g, — lb r, 22 c, — h. Pres. T. J. Minary, Sec. & Treas. Thos. Donigan.  
 Central Pass. R.R. Co.  
 Crescent Hill Ry. Co.  
 Louisville City Ry. Co. 63 m, 5 g, — lb r, 199 c, 1300 h. Pres. Maj. Alexander Henry Davis, Syracuse, N. Y., V. Pres. St. John Boyle, Sec. & Treas. R. A. Watts, Supt. H. H. Littell.  
**LOWELL, MASS.**—Lowell Horse R.R. Co. 6 m, 4-8½ g, 28-47 lb r, 28 c, 100 h. Pres. Wm. E. Livingston, Gen. Man. J. A. Chase.  
**LYNCHBURG, VA.**—Lynchburg St. R.R. Co. 2 m, 5-1 g, 26 lb r, 6 c, 31 h. Pres. Stephen Adams, Treas. John L. Adams, Supt. William M. Payne.  
**LYONS, IA.**—Clinton & Lyons Horse Ry. Co. 4½ m, 3-8 g, 19-30 lb r, 15 c, 40 h. Pres. D. Joyce, V. Pres. & Man. R. N. Rand.  
**MACON, GA.**—Macon & Suburban St. Ry. Co. 6 m, — g, 20 lb r, 10 c, 50 h & mu. Pres. T. J. Carling, Sec. & Treas. H. R. Brown, Office, 151 Second St.  
**MADISON, IND.**—Madison St. Ry. Co. 2¼ m, 4 g, 15 lb r, 7 c, 8 h, 10 mu. Pres. Jacob Wendle, V. Pres. Peter F. Robenius, Supt. & Treas. Chas. F. Tuttle.  
**MADISON, WIS.**—Madison St. Ry. Co. 2¼ m, 3 g, 23 lb r, 6 c, 24 h. Pres. E. W. Keyes, V. Pres. Sec. & Treas. D. K. Tenney, Supt. G. W. Carse.  
**MANCHESTER, N. H.**—Manchester Horse R.R. Co. 4½ m, 3-¾ g, 27-34 lb r, 12 c, 41 h. Pres. S. N. Bell, Treas. Frederick Smyth, Clerk J. A. Weston, Supt. A. Q. Guage.  
**MARYSVILLE, CAL.**—City Pass. R.R. Co. (No returns.)  
**MECHANICSBURG, ILL.**—Mechanicsburg & Buffalo Ry. Co. 3½ m, 3-10 g, 16 lb r, 3 c, 4 mu. Pres. J. N. Fullenwelder, Treas. A. T. Thompson, Sec. J. T. Fullenwelder.  
**MEMPHIS, TENN.**—Memphis City R.R. Co.  
**MERIDIAN, MISS.**—Meridian St. Ry. Co. 1¼ m, 4-8 g, 16 lb r, 3 c, 12 h. Pres. J. Shannon, V. Pres. J. L. Handley, Sec. R. M. Houston.  
**MIDDLETOWN, O.**—Middletown & Madison St. Ry. Co.

**GAINSVILLE, TEX.**—Gainsville St. Ry. Co. 2¼ m, 3-6 g, 17 lb r, 4 c, 12 h. Pres. C. N. Stevens, V. Pres. J. T. Harris, Sec. & Treas. F. R. Sherwood.  
**GALESBURG, ILL.**—Galesburg Horse R.R. Co.  
**GALVESTON, TEX.**—Galveston City R.R. Co. 18 m, 4-8½ g, 30 lb r, 68 c, 169 mu. Pres. Wm. H. Sinclair, Sec. & Treas. F. D. Merrit, Supt. M. J. Keenan.  
 Gulf City St. Ry. & Real Estate Co.  
**GLOUCESTER, MASS.**—Gloucester City R.R.  
**GRAND RAPIDS, MICH.**—Street Ry. Co. of Grand Rapids, Mich. 13 m, 4-8½ g, 30-35 lb r, 21 c, 175 h. Pres. C. A. Otis, Cleveland, O., V. Pres. L. H. Withey, Grand Rapids, Treas. M. S. Crosby, Grand Rapids, Sec. J. M. Weston, Grand Rapids, Asst. Sec. Jas. Pickands, Cleveland, O.  
**GREEN CASTLE, IND.**—Green Castle City St. Ry. Co. 2 m, 4-8½ g, 23 lb r, 3 c, 12 h. Pres. & Supt. D. Rogers, Sec. James S. Nutt, Treas. Rudolph Rogers.  
**GREENVILLE, S. C.**—Greenville City Ry. Co. 1 m, 5 g, — lb r, 5 c, 20 h. Proprietors, Gilreath & Harris.  
**HAMILTON, O.**—The Hamilton St. Ry. Co. 4 m, 3 g, 28 lb r, 11 c, 12 h. Pres. James F. Griffin, Sec. O. V. Parrish, Treas. H. L. Morey, Supt. J. C. Bigelow.  
**HANNAH, MO.**—Hannah St. Ry. Co. 2 m, 4-8½ g, 16-36 lb r, 6 c, 22 h. Pres. & Supt. M. Doyle, Sec. & Treas. James O. Hearn.  
**HARRISBURGH, PA.**—Harrisburgh City Passenger Ry. Co. 2¼ m, 5 2½ g, 42-47 lb r, 15 c, 36 h, Pres. H. A. Kelker, V. Pres. Daniel Eppy, Sec. John T. Ensinger, Treas. R. F. Kelker, Supt. S. B. Reed.  
**HARTFORD, CONN.**—Hartford & Wethersfield Horse R.R. Co. 12 m, 4-8½ g, 45 lb r, 49 c, 250 h. Pres. & Treas. E. S. Goodrich, Sec. Geo. Sexton.  
**HAVERTHILL, MASS.**—Haverhill & Groveland St. Ry. Co. 4½ m, 4-8½ g, 30 lb r, 10 c, 19 h. Pres. Jas. D. White, Treas. John A. Colby, Supt. L. R. Mitchell.  
**HELENA, ARK.**—Helena St. Ry. Co.  
**HERKIMER, N. Y.**—Herkimer & Mohawk St. Ry. Co. 1¼ m, 4-8½ g, 25 lb r, 3 c. Pres. J. M. Anslem, Sec. Joab Small, Treas. H. D. Alexander.  
**HOBOKEN, N. J.**—North Hudson County Ry. Co. 16½ m, 4-7 g, 50-60 lb r, 116 c, 630 h. Pres. John H. Bonn, Sec. F. J. Mallory, Treas. Fredk. Mickel, Union, Supt. Nicholas Goetz, Union.  
**HOLYOKE, MASS.**—Holyoke St. Ry. Co. 2 m, 4-8½ g, 35 lb r, 8 c, 24 h. Pres. Wm. A. Chase, Treas. C. Fayette Smith, Supt. H. M. Smith.  
**HOT SPRINGS, ARK.**—Hot Springs R.R. Co. 3 m, 4 g, 25 lb r, 11 c, 30 h. Pres. S. W. Fordyce, Sec. C. E. Maurice, Supt. J. L. Butterfield.  
**HOUSTON, TEX.**—Houston City St. Ry. Co. 13 m, 4-8½ g, 20-30-40 lb r, 40 c, 118 m. Pres. Wm. H. Sinclair, Galveston, V. Pres. & Gen. Man. H. F. McGregor, Houston, Supt. Henry Friend, Houston, Sec. & Treas. F. J. DeMeritt, Galveston.  
**HUTCHINSON, KAN.**—Hutchinson St. Ry. Co.  
**HYDE PARK, ILL.**—Ewing Avenue Horse Ry. Co. 4-8½ g. Pres. Andrew Rehm, Sec. A. Krimbill.  
**ILION, N. Y.**—Frankfort & Ilion Ry. Co. 2¼ m, 5 g, 25 lb r, 4 c, 6 h. Pres. A. C. McGowan, Sec. D. Lewis, Treas. F. Remington, Supt. Frederick Gates.  
**INDIANAPOLIS, IND.**—Citizens' St. Ry. Co. 35 m, 4-8½ g, 20-33-40-52 lb r, 70 c, 530 h. Pres. A. W. Johnson, Indianapolis, Treas. Tom L. Johnson, Cleveland, O. Sec. A. A. Anderson, Indianapolis, Man. W. T. Steele, Indianapolis, Auditor P. Woodridge, Louisville, Ky.  
**IRVINGTON, N. J.**—Newark & Irvington R.R. Co.  
**JACKSON, MICH.**—Jackson City Ry. Co. — m, — g, — lb r, 11 c, 40 h. Pres. Hiram H. Smith, Treas. Samuel Hopewell, Gen. Supt. Henry H. Smith.  
**JACKSON, MISS.**—Jackson Street Ry. Co.  
**JACKSON, TENN.**—Jackson Street Ry. Co.  
**JACKSONVILLE, FLA.**—Pine St. R.R. Co. 2½ m, 5 g, 25 lb r, 4 c, 18 m. Owner & Gen. Man. G. H. Backinast, Sec. & Treas. F. W. Backinast.  
 Jacksonville St. Ry. Co. 2¼ m, 5 g, 25 lb r, 10 c, 36 m. Pres. H. S. Haines, Savannah, Ga., V. Pres. & Sec. Geo. R. Foster, Treas. W. P. Hardee, Savannah, Ga., Supt. G. W. Haines.  
**JACKSONVILLE, ILL.**—Jacksonville Ry. Co.  
**JAMAICA, N. Y.**—Jamaica & Brooklyn R.R. Co. 10 m, 4-8½ g, 56-60 lb r, 29 c, 56 h. Pres. Aaron A. DeGrauw, Sec. Martin J. Durea, Treas. Morris Fodlick, Supt. Wm. M. Scott.  
**JAMESTOWN, N. Y.**—Jamestown St. Ry. Co. 2 m, 4-8½ g, 30-42 lb r, 7 c, 9 h. Pres. John T. Wilson, Sec. C. R. Lockwood, Treas. John Langford, Supt. John F. Wilson.  
**JERSEY CITY, N. J.**—Jersey & Bergen R. R. Co. 21 m, 4-10 g, 60 lb r, 73 c, 494 h. Pres. Chas. B. Thurston, V. Pres. Wm. Keeney, Treas. C. B. Place, Sec. Warren E. Dennis, Newark, Supt. Thos. M. Sayre.  
 Pavonia Ferry Ry. Co.  
**JOHNSTOWN, N. Y.**—The Johnstown, Gloversville & Kingsboro Horse R.R. Co. 5¾ m, 4-8½ g, 26 lb r, 6 c, 16 h. Pres. James Younglove, V. Pres. R. Fancher, Sec. & Treas. I. M. Law.  
**JOHNSTOWN, PA.**—Johnstown Pass. R.R. Co. 6¼ m, 5-3 g, 41-43 lb r, 13 c, 56 h. Pres. James McMullen, Sec. B. L. Yeagley, Treas. W. H. Rosensleer, Jr.  
**JOLIET, ILL.**—Joliet City R.R. Co. 3½ m, 4-8½ g, 40 lb r, 16 c, 30 h & mu. Owner, J. A. Henry, A. Blesman, Cash. J. E. Henry.  
**JOPLIN, MO.**—  
**KALAMAZOO, MICH.**—Kalamazoo St. Ry. Co. 10 m, 4-8½ g, 35 lb r, 28 c, 80 h. Pres. Fred Bush, Sec. J. W. Boynton, Treas. P. H. Brown.  
**KANSAS CITY, MO.**—Kansas City Cable Ry. Co. 2¼ m, 4-8½ g, 45 lb r, 10 pass. cars, 10 dummy cars. Pres. Wm. J. Smith, Sec. W. H. Lucas, Eng. Robert Gillham.  
 Corrigan Consolidated St. Ry. Co. 20 m, 4-1 g, 30 lb r, 80 c, 350 h. Pres. Bernard Corrigan, Gen. Man. Thos. Corrigan, Sec. Jas. T. Kelley.  
 Jackson County Horse R. R. Co.  
 Kansas City & Rosedale St. Ry. Co.  
 Kansas City & Westport St. R.R. Co.  
**KEOKUK, IA.**—Keokuk St. Ry. Co. 4 m, 4-8½ g, 27 lb r, 10 c, 42 h. Pres. Jas. H. Anderson, V. Pres. Jos. G. Anderson, Sec. R. James Anderson, Treas. & Supt. W. Z. Anderson.  
**KINGSTON, ONT., CAN.**—Kingston St. R.R.

**MILLERSVILLE, PA.**—Lancaster & Millersville St. R.R. Co.

**MILWAUKEE, WIS.**—Cream City R.R. Co. 8 1/2 m, 4-8 1/2 g, 27-38 lb r, 74 c, 307 m, 2 h. Pres. Winfield Smith, V. Pres. Christian Pressner, Treas. Ferdinand Knehn, Sec. Wm. Damkoehler, Supt. Henry Berg.

Milwaukee City Ry. Co. 15 m, 4-8 1/2 g, 27 lb r, 75 c, 430 h. Pres. Peter McGeoch, Sec. & Treas. Geo. O. Wheatcroft.

West Side St. Ry. Co. Owner & Manager, Washington Becker, Supt. —McNaughton.

**MINNEAPOLIS, MINN.**—Minneapolis St. Ry. Co. 45 m, 3-6 g, 27-35-45 lb r, 146 c, 725 h and mu. Pres. Thos. Lowry, V. Pres. C. Morrissey, Treas. W. W. Herrick, Sec. & Supt. C. G. Goodrich.

**MOBILE, ALA.**—City R.R. Co. 17 1/2 m, 5-2 g, 35 lb T-r, 68 c, 240 h. Pres. Jno. Maguire, Sec. I. Strausse, Treas. Myer I. Goldsmith, Supt. A. Moog. Dauphin & Lafayette St. Ry. Co. 2 m, 5-2 1/2 g, 40 lb r, 9 c, 22 h. Pres. D. P. Bestor, V. Pres. G. Y. Overall, Sec. & Treas. James W. Gray, Pur. Agt. & Man. J. G. Robertson.

Mobile & Spring Hill R.R. Co. 8 m, 5-2 1/2 g, 35 lb r, 15 c, 35 h, 1 dummy. Pres. Daniel M. Neill, Sec. & Treas. C. F. Sheldon, Man. F. Ingato.

**MOHAWK, N. Y.**—Mohawk & Ilion R.R. Co. 1 1/2 m, 4-8 1/2 g, 30 lb r, 4 c (contract for motive power). Pres. O. W. Bronson, V. Pres. John Brown, Sec. H. D. Alexander, Treas. R. M. Devendorf, Supt. O. W. Bronson.

**MOLINE, ILL.**—Moline Central St. Ry. Co. 1 1/2 m, — g, — lb r, 3 c, 11 h. Pres. S. W. Wheelock, V. Pres. M. Y. Cady, Sec. W. R. Moore, Treas. C. F. Hemenway.

Moline & Rock Island St. Ry. Co. — m, — g, — lb r, — c, — h. Pres. J. Huntoon, Sec. I. M. Buford, Treas. C. Lyons, Supt. Wm. Gamble.

**MONTREAL, CAN.**—Montreal City Pass. Co. 21 m, 4-8 1/2 g, — lb r, 76 c, 465 h. Pres. Jesse Joseph, V. Pres. Wm. Smith, Sec. & Man. Ed. Lusher, Supt. T. H. Rohlland.

**MOUTRIEVILLE, S. C.**—Middle St. & Sullivan's Landing Ry.

**MUSKOGON, MICH.**—Muskegon Ry. Co. 4 1/2 m, 3-6 g, 20 lb r, 8 c, 26 h, 8 mu. Pres. F. A. Nims, V. Pres. Chas. Merriman, Boston, Mass., Sec. Thomas Munroe, Treas. G. R. Sherman, Supt. C. H. Newell.

**NASHUA, N. H.**—Nashua St. Ry. Co.

**NASHVILLE, TENN.**—Nashville & Edgefield R.R. Co. Fatherland Street Railway Co. North Edgefield and Nashville St. R.R. Co. one management. 5 m, 5 g, 16 lb r, 21 c, 100 h. Pres. Jno. P. White, Sec. & Treas. H. B. Stubblefield, Supt. Daingerfield Deaderick.

McGavock & Mt. Vernon Horse R.R. Co. Nashville D. & N. St. R.R. Co. 7 1/2 m, 5 g, 16-32 lb r, 25 c, 140 mu. Pres. Jno. P. White, V. Pres. B. F. Wilson, Sec. & Treas. H. B. Stubblefield, Supt. D. Deaderick.

South Nashville St. R.R. Co. 4 1/2 m, 5 g, 16-20 lb r, 10 c, 68 h. Pres. W. M. Duncan, Sec., Treas. & Supt. C. L. Fuller.

**NEVADA, MO.**—Nevada Street Ry. Co.

**NEW ALBANY, IND.**—New Albany St. Ry. Co. 6 m, 4-11 g, 25 lb r, 15 c, 50 h. Pres. Geo. T. Vance, Sec. G. Vance, Treas. Letitia V. Vredenburg, Supt. Wm. L. Timberlake.

**NEWARK, N. J.**—The Newark & Bloomfield St. R.R. Co. 7 m, 5-2 1/2 g, 47 lb r, 22 c, 140 h. Pres. S. S. Battin, Sec. W. L. Mulford, Supt. H. F. Totten.

**NEW BEDFORD, MASS.**—New Bedford & Fairhaven St. Ry. Co. 7 1/2 m, 4-8 1/2 g, 35-40 lb r, 38 c, 138 h. Pres. Warren Ladd, Treas. Andrew G. Pierce, Clerk Edward T. Pierce.

Acushnet St. R.R. Co., (not in operation.) Pres. Chas. E. Cook, Sec. & Treas. A. P. Smith.

**NEWBURYPORT, MASS.**—Newburyport & Amesbury Horse R.R. Co. 6 1-3 m, 12 c, 54 h. Pres. W. A. Johnson, Treas. N. H. Shepard, Sec. Geo. H. Stevens.

**NEW HAVEN, CONN.**—Fair Haven & Westville R.R. Co. 7 m, 4 1/2 g, 42 lb r, 23 c, 151 h. Pres. H. B. Ives, Sec. & Treas. G. Cander, Supt. Walter A. Graham.

New Haven & Centreville Horse R.R. Co. 2 1/2 m, 4-8 1/2 g, 42 lb r, 4 c, 30 h. Trustee Cornelius Pierpont. State Street Horse R.R. Co. 2 1/2 m, 4-8 g, 43 lb r, 4 c, 40 h. Pres. C. A. Warren, Sec. & Treas. C. C. Blatchen. The Whitney Ave. Horse Ry. 2 1/2 m, 4-8 1/2 g, 25 lb r, 3 c, 25 h. Pres. Geo. H. Watsons, Sec. George D. Watson, Treas. Eli Whitney, jr.

**NEW ORLEANS, LA.**—Canal & Claiborne St. R.R. Co. 13 m, 5-2 1/2 g, 37 lb r, 40 c, 200 h. Pres. E. J. Hart, Sec. & Supt. John H. DeGrange.

Crescent City R.R. Co. 26 m, 5-2 1/2 g, 35-45 lb r, 90 c, 400 h. Pres. Frank Roder, Sec. & Treas. Jno. J. Juden, Supt. A. V. Smith.

New Orleans & Carrollton R.R. Co. 8 m, 4-8 1/2 g, 30-45 lb r, 65 c, 200 h, 19 engines. Pres. Wm. Benthamsen, Sec. Walter F. Crouch, Supt. C. V. Halle.

New Orleans City & Lake R.R. Co. 64 m, 5-2 1/2 g, 46-40 lb r, 180 c, 39 coaches, dummy engines, 1050 mu. Pres. J. A. Walker, Sec. W. E. Leverich, Supt. F. Wintz.

New Orleans St. R.R. Co. Orleans R.R. Co. — m, — g, — lb r, 32 c, 140 h & mu. Pres. & Supt. H. L. Larcule, Sec. & Treas. P. Cougot. Office, cor. White & Laharpe Sts.

St Charles St. R.R. Co. 15 m, 5-2 1/2 g, 42 lb r, 60 c, 366 m. Pres. & Supt. Alden McLellan, Sec. Vincent Riviere.

**NEWPORT, KY.**—Newport St. R.R. Co.

**NEW YORK, N. Y.**—Ninth Ave. R.R. Co. 8 m, 4-8 1/2 g, 60 lb r, 45 c, 380 h. Pres. W. H. Hays, Sec. & Treas. James Affleck, Supt. Herman B. Wilson.

Broadway & Seventh Ave. R.R. Co. 7 m, 4-8 1/2 g, 47-60 lb r, 150 c, 1,350 h. Pres. James W. Foshay, Sec. & Treas. Thos. B. Kerr, Supt. Henry A. Newell.

Central Crosstown R.R. Co. 2 1/2 m, 4-8 1/2 g, 52 lb r, 42 c, 231 h. Pres. John B. Slawson, V. Pres. A. Cammack, Sec. M. J. Masson, Treas. John L. Macaulay.

Central Park North & East River R.R. Co. 14 m, 4-8 1/2 g, 60 lb r, 162 c, 1,225 h. Pres. J. H. Scribner, V. Pres. C. D. Wyman, Sec. H. Scribner, Treas. J. L. Valentine, Supt. M. W. A. Harris.

Christopher & Tenth St. R.R. Co. 5 m, 4-8 g, 45 lb

r, 47 c, 290 h. Pres. Jacob Sharp Treas. W. T. Hatch, Sec. & Supt. George W. Lynch.

Dry Dock, East Broadway & Battery R.R. Co. 11 1/2 m, 4-8 1/2 g, 60 lb r, 187 c, 1,132 h. Pres. William White, Auditor E. T. Landon, Sec. & Treas. Richard Kelly, Supt. Fred F. White. Offices, 605 Grand St.

Eight Ave. R.R. Co. 10 m, 4-8 1/2 g, 60 lb r, 112 c, 1155 h. Pres. W. H. Hays, Sec. & Treas. James Affleck, Supt. H. B. Wilson.

Forty-Second Street & Grand Street Ferry R.R. Co. 5 1/2 m, 8-4 g, 64 lb r, 50 c, 500 h. Pres. Chas. Curtis, Sec. & Treas. E. S. Allen, Supt. John M. Calhoun.

Harlem Bridge, Morrisania & Fordham Ry. 4 1/2 m, 4-8 1/2 g, 45-60 lb r, 65 c, 233 h. Pres. Henry Spratley, V. Pres. Richard M. Hoe, Sec. & Treas. Wm. Caldwell.

Houston, West Street & Pavia Ferry R.R. Co. 5 m, 4-8 1/2 g, 60 lb r, 50 c, 400 h. Pres. Richard Kelly, Sec. & Treas. Daniel B. Hasbrook.

Jerome Park R.R. 1 m, 4-8 1/2 g, 50-56 lb r. Pres. Leonard M. Jerome, Sec. Fred A. Lovcraft, Treas. Theodore Moss.

New York City St. Ry. Co. 10 m, (not in operation). Pres. Loomis L. White, Sec. W. L. McCorkle, Treas. Wm. L. Skidmore.

New York & Harlem R.R. Co. 5 1/2 m, 4-8 1/2 g, 56-75 lb r, 144 c, 1,408 h. Pres. W. H. Vanderbilt, V. Pres. & Sec. Cornelius Vanderbilt, Treas. Ed. V. W. Rossiter, Supt. Alfred Skitt, Pur. Agt. Chas. Reed.

Sixth Ave. R.R. Co. 4 m, 4-8 1/2 g, 60 lb r, 127 c, 1296 h.

South Ferry Ry. Co. 3/4 m, 4-8 1/2 g, 60 lb r, 13 c, 41 h. Pres. Henry Hart, Sec. Wm. N. Cohen, Treas. Albert J. Elias, Supt. Chas. H. Meeks.

The Second Ave. R.R. Co. 13 m, 4-8 1/2 g, 60 lb r, 316 cars, 1750 h. Pres. W. Thorn, V. Pres. J. Wadsworth, Sec. & Treas. J. B. Underhill.

The Third Ave. R.R. Co. 13 1/2 m, 4-8 1/2 g, 60 & 74 lb r, 318 c, 2150 h. (3 1/2 m of cable road on 10th ave.) Pres. Lewis Lyon, 739 Madison ave., V. Pres. Henry Hart, 110 Tribune Building, Sec. Alfred Lazarus, 436 W. 61st st. Treas. John Beaver, 211 E. 112th st, Supt. John H. Robertson, 307 E. 65th st.

Twenty-third St. R.R. Co. 7 m, 4-8 1/2 g, 54 lb r, 102 c, 692 h. Pres. Jacob Sharp, Sec. Thos. H. McLean, Treas. Lewis May, Act-Supt. George Ferry.

**NIAGARA FALLS, N. Y.**—Niagara Falls & Suspension Bridge Ry. Co. 2 1/2 m, 4-8 1/2 g, 38-42 lb r, 8 c, 36 h. Pres. Benj. Flagler, V. Pres. Alva Chich, Sec. W. J. Mackay, Treas. A. Schoellkopf.

**NORFOLK, VA.**—Nortolk & City R.R. Co. 3 1/2 m, 5-2 g, 44 lb r, 18 c, 65 h. Pres. John B. Whitehead, Treas. H. C. Whitehead, Supt. E. W. Savage.

**NORTHAMPTON, MASS.**—Northampton St. Ry. Co. 3 1/2 m, 4-8 1/2 g, 32 lb r, 7 c, 26 h. Pres. Oscar Edwards, Sec. M. H. Spaulding, Treas. & Sup. E. C. Clark.

**NORWALK, CONN.**—Norwalk Horse R.R. Co. 2 m, 4-10 g, — lb r, 7 c, 20 h. Pres. James W. Hyatt, V. Pres. & Sec. Edwin G. Hoyt, Sup. James W. Hyatt.

**NORWICH, CONN.**—Norwich Horse R.R. Co.

**OKLAHMA, CAL.**—Alameda, Oakland & Piedmont R.R. Berkley Villa R.R. Broadway & Piedmont St. R.R. Co. Fourteenth St. R.R. Co. 6 m, 5 g, 20-30 lb r, 6 c, — h. Pres. & Supt. Walter Blair, Sec. P. J. Van Loben. Oakland R.R. Co.

**OGDEN CITY, UTAH.**—Ogden City Ry. Co. 3 m, 4-8 1/2 g, 20 lb r, 4 c, 21 h. Pres. L. W. Shurtleff, Ogden City, V. P. & Supt. O. P. Arnold, Salt Lake City, Sec. & Treas. H. S. Young, Ogden City.

**OLEAN, N. Y.**—Olean St. Ry. Co. 1-1-10 m, 3-6 g, 25 lb r, 3 c, 2 h. Pres. M. B. Fobes, Sec. & Treas. M. W. Barse.

**OMAHA, NEB.**—Omaha Horse Ry. Co. 15 m, 4-8 1/2 g, 35 lb r, 40 c, 300 h. Pres. Frank Murphy, V. Pres. Guy C. Barton, Treas. W. W. Marsh, Supt. W. A. Smith.

**ONEIDA VILLAGE, N. Y.**—Oneida St. Ry. — m, — g, — lb r, — c, — h. Pres. Jerome Heacock.

**OSHKOSH, WIS.**—Oshkosh St. R.R. Co. 3 1/2 m, 4-8 1/2 g, 27 lb r, 9 c, 24 h. Pres. Tom Wall, V. Pres. F. Zentner, Sec. & Treas. J. Y. Hull, Sup. F. L. Thompson.

**OSWEGO, N. Y.**—Oswego St. Ry. Co. 2 m, 4-8 1/2 g, 45 lb r, 3 c, — h. Pres. Jas. F. Johnson, V. Pres. R. J. Oliphant, Sec. Haynes L. Hart, Treas. Robt. G. Post, Gen. Man. James O'Connor. [Not in operation yet.]

**OTTAWA, ONT.**—Ottawa City Passenger Ry. Co. 3 m, 4-8 1/2 g, 34 lb r, 1 c, 40 h. Pres. Thomas C. Keefe, V. Pres. R. Blackburn, Sec. James D. Traser.

**OTTUMWA, IA.**—Ottumwa St. R.R. Co. 2 m, 3-6 g, 27 lb r, 4 c, 2 h, 14 mu. Pres. J. M. Hedrick, Sec. & Treas. H. L. Hedrick, Supt. C. M. Hedrick.

Mineral Springs St. Ry. Co. 1 m, 1 c.

**PADUCAH, KY.**—Park R.R. Co.

**PARIS, TEX.**—Paris St. Ry. Co.

**PATERSON, N. J.**—Paterson & Passaic R.R. Co. 7 m, 4-10 g, 33 lb r, 16 c, 24 h. Pres. John N. Terhune, Treas. John I. Brown, Sec. F. S. Brown, Man. & Pur. Agt. Ambrose T. King, Supt. M. O. Rourke.

Paterson City R.R. Co. 6 1/2 m, 4-8 1/2 g, 35 lb r, 12 c, 31 h. Pres. Garrett Plantan, Treas. Helmas Romaine, Sec. Albert A. Wilcox.

**PENSACOLA, FLA.**—Pensacola St. Ry. Co.

**PEORIA, ILL.**—Central City Horse Ry. Co. 4 1/2 m, 4-8 1/2 g, 40 lb r, 60 c, 135 h. Pres. H. R. Woodward, Sec. M. Pfeiffer, Treas. H. N. Wheeler, Supt. John Strong.

Fort Clark Horse Ry. Co. Peoria Horse Ry. Co. 7 1/2 m, 4-8 1/2 g, 40 lb r, 63 c, 140 h. Pres. H. Woodward, Sec. M. Pfeiffer, Treas. H. N. Wheeler, Supt. John Strong.

**PETERSBURGH, VA.**—Petersburgh St. Ry. Co. 3 1/2 m, 4-8 1/2 g, 42 lb r, 9 c, 44 h. George Beadle, Proprietor.

**PHILADELPHIA, PA.**—Citizens Pass. Ry. Co. 10 1/2 m, 5-2 g, 45-47 lb r, 92 c, 420 h. Pres. John McCarthy, Sec. & Treas. John J. Adams, Supt. Sam'l Cline.

Frankford & Southwark Phila. City Pass. R.R. Co. 18 1-10 m, 5-2 g, 47 lb r, 91 c, 8 dummy c, 580 h. Pres. Henry Gelger, Sec. & Treas. Geo. L. Gaudy, Supt. W. H. Janney.

Hestonville, Mantua & Fairmount Pass. R.R. Co. 20

m, 5-2 g, 43 lb r, 50 c, 480 h. Pres. Charles F. Lafferty, Sec. & Treas. W. C. Foster.

Lehigh Ave. Pass. Ry. Co. Pres. John Lamson, Sec. Chas. A. Porter, Treas. John L. Hill. [Track not laid.]

Lombard & South Sts. Pass. Ry. Co. — m, 5-2 g, 43 lb r, 51 c, 278 h. Pres. John B. Parsons, Sec. & Treas. Francis Hagerhust Supt. Jno. M. Gaughen.

People's Pass. Ry. Co. 44 m, 5-2g, 47 lb r, 125 c, 1,080 h. Pres. C. J. Harrah, V. Pres. C. J. Harrah, Jr., Sec. & Treas. Jno. C. Dossalet, Supt. Wm. Hagenswiler.

Philadelphia City Pass. Ry. Co. 7 m, 5-2 1/2 g, 47 lb r, — c, — h. Pres. Wm. W. Colket, Sec. & Treas. T. W. Pennypacker.

Philadelphia Traction Co. 109 m, 5-2 1/2 g, 45-78 lb r, 595 c, 3,160 h. Pres. W. H. Kemble, V. Pres. P. A. B. Widener & W. L. Elkins, Sec. & Treas. D. W. Dickenson.

Philadelphia & Gray's Ferry Pass. R.R. Co. 10 1-3 m, 40 c, 200 h. Pres. Matthew Brooks, Treas. J. C. Dawes, Sec. J. Crawford Dawes, Supt. Patrick Lovett.

Ridge Avenue Pass. Ry. Co. 14 m, 5-2 g, 47 lb r, 55 c, 352 h. Pres. E. B. Edwards, V. Pres. John Lambert, Sec. & Treas. Wm. S. Blight, Supt. William Ingles.

Second & Third Sts. Pass. Ry. Co. 37 m, 116 c, 669h. Pres. Alexander M. Fox, Treas. William F. Miller, Sec. Charles D. Matlack, Supt. David W. Stevens.

Seventeenth & Nineteenth Sts. Pass. Ry. Co. 7 1/2 m. Pres. Matthew S. Quay, Sec. & Treas. John B. Peddle. [Leased to Philada. Traction Co.]

Thirteenth & Fifteenth Sts. Pass. Ry. Co. 14 m, 5-2 g, 43 lb r, 73 c, 452 h. Pres. Thos. W. Ackley, Sec. & Treas. Thos. S. Harris, Supt. Wm. B. Cooper.

Union Pass. Ry. Co. 70 m, 348 c, 1,724 h. Pres. Wm. H. Kemble, Sec. & Treas. John B. Peddle, Supt. Jacob C. Petty.

West Philadelphia Pass. Ry. Co. 18 1/2 m, 122 c, 646 h. Pres. Peter A. B. Widener, Sec. & Treas. D. W. Dickson. (Leased by the Phila. Traction Co.)

**PHILIPSBURGH, N. J.**—Phillipsburgh Horse Car Ry. Co. 2 1/2 m, 4-8 g, 35 lb r, 4 c, 13 h. Pres. Daniel Runkle, Sec. & Treas. James W. Long.

**PITTSBURGH, PA.**—Central Pass R.R. Co. 3 m, 16 c, 95 h. Pres. J. F. Cluley, Sec. F. L. Stephenson, Treas. E. R. Jones, Supt. R. G. Heiron.

Beaver Falls & New Brighton Ry. Co. (Citizens' Pass. Ry. Co. 16 1/2 m, 5-2 1/2 g, 47 lb r, 40 c, 337 h. Pres. Jno. G. Holmes, Sec. C. M. Gormly, Supt. Murry Verner.

Federal St. & Pleasant Valley Pass. Ry. Co. 26 m, 5-2 1/2 g, 46-50 lb r, 20 c, 154 h. Pres. Wm. H. Creery, Treas. James Boyle, Supt. Wm. J. Crozier, Allegheny City.

People's Park Pass. Ry. Co. 2 m, 5-2 1/2 g, — lb r, 10 c, 75 h. Pres. Wm. McCreery, Treas. James Boyle, Supt. Wm. J. Crozier, Allegheny City.

Pittsburgh, Allegheny & Manchester Pass. Ry. Co. 5 m, 5-2 1/2 g, 46 lb r, 40 c, 275 h. Pres. Chas. Atwell, Sec. & Treas. Chas. Seibert, Supt. James C. Cotton.

Pittsburgh, Oakland & East Liberty Pass. Ry. Co. 11 m, 5-4 1/2 g, 47 lb r, 32 c, 110 h, 61 mu. Pres. J. T. Jordan, Sec. John G. Traggardth, Treas. D. W. C. Bidwell, Supt. H. M. Cherry.

Pittsburgh Union Pass. R.R. Co. 5 m, 5-2 1/2 g, 45 lb r, 29 c, 170 h. Pres. James H. Sewell, Treas. J. J. McDonnell, Sec. Chas. Seibert, Pittsburgh, Cash. Charles W. Goodnow, Supt. Joe S. Murray.

Pittsburgh & Birmingham Pass. R.R. Co. 3 1/2 m, 5-2 1/2 g, 48 lb r, 20 c, 170 h. Pres. W. W. Patrick, Sec. D. F. Agnew, Treas. John G. Holmes.

Pittsburgh & West End Pass. Ry. Co. 3 1/2 m, 5-2 g, 35 lb r, 13 c, 75 h. Pres. John C. Reilly, Sec. & Treas. Thomas S. Bigelow, Supt. William J. Burns.

Pittsburgh & Wilksburg St. Ry. Co. Second Avenue Pass. Ry. Co. South Side Pass. R.R. Co. 2 1/2 m, 5-2 1/2 g, 45 lb r, 12 c, 80 h. Pres. D. Z. Brickell, Sec. & Treas. W. T. Wallace, Supt. W. M. Rosborough.

Transverse Pass. Ry. Co. 6 1/2 m, 5-2 g, 52 lb r, 39 c, 243 h. Pres. C. L. Magee, V. Pres. C. F. Klopfer, Sec. & Treas. Wm. R. Ford, Supt. Miller Elliot.

**PITTSWON, PA.**—Pittston St. R.R. Co. 1 1/2 m, 3 c, 5 h. Pres. Thos. Griffith, Treas. M. W. Morris, Sec. William Allen.

**PORT HURON, MICH.**—Port Huron St. Ry. Co. 6 1/2 m, 4-8 1/2 g, 7 c, 22 h. Pres. Jno. P. Sanborn, V. Pres. Frank A. Beard, Sec. Treas. & Man. J. R. Was-tell.

**PORTLAND, ME.**—Ocean St. R.R. Co. Portland R.R. Co. 7 1/2 m, 4-8 1/2 g, 30-33-45 lb r, 34 c, 154 h. Pres. H. J. Libby, Treas. & Gen. Man. E. A. Newman, Supt. Geo. W. Soule.

**PORTSMOUTH, O.**—Portsmouth St. R. R. Co. 2 m, 3-6 g, 18 lb r, 4 c, 10 h. Pres. James Skelton, Treas., Sec. & Supt. Enas Reed.

**POTTSVILLE, PA.**—People's Ry. Co. 9 1/2 m, 16 c, 56 h.

**POUGHKEEPSIE, N. Y.**—City R.R. of Poughkeepsie. 3 m, 4-8 1/2 g, 35 lb r, 11 c, 38 h. Pres. Aaron Inns, V. Pres. G. B. Adrance, Sec. A. B. Smith, Treas. Hudson Taylor, Supt. C. M. Davis.

**PROVIDENCE, R. I.**—Union R.R. Co. 50 m, 4-8 1/2 g, 24-54 lb r, 240 c, 1,200 h. Pres. Jesse Metcalf, V. Pres. & Gen. Man. D. F. Longstreet, Sec. and Treas. C. A. Babcock, Aud. B. A. Jackson.

**QUEBEC, CAN.**—Quebec St. Ry. Co. 3 m, 4-8 1/2 g, 45 lb r, 9 c, 40 h. Pres. Chas. St. Michel, Quebec, V. Pres. G. Renfrew, Quebec, Sec. & Supt. Samuel Moore, Book-keeper, Francis Boomer. Quebec R.R. Co. St. John St. R.R.

**QUINCY, ILL.**—Quincy Horse Ry. & Carrying Co. 6 m, 5 g, 71 lb r, 21 c, 118 mu. Pres. Lorenzo Bull, Sec. C. H. Bull, Supt. E. K. Stone.

**RACINE, WIS.**—Belle City St. Ry. Co.

**READING, PA.**—Reading City Pass. Ry. Co. 21-5 m, 5 2/4 g, 45 lb r, 19 c, 44 h. Pres. B. F. Owen, V.

RED OAK, IA.—Red Oak St. R.R. Co. 1½ m, 4-2½ g, flat r, 2 c, 2 h, 2 mu. Pres. J. W. Judkins, V. Pres. Geo. West, Sec. F. M. Byrket, Treas. & Supt. F. O. Judkins.

RICHMOND, IND.—Richmond City Ry. Co. 3 m, 3 g, 25 lb r, 9 c, 30 h. Pres. J. Y. Miller, V. Pres. Joseph Radliff, Treas. H. I. Miller, Supt. F. M. Francisco.

RICHMOND, ILL.—Richmond St. R.R. Co.

RICHMOND, VA.—Richmond City Ry. Co. 7 m, 4-8½ g, 60-40 lb r, 40 c, 180 h. Pres. J. H. Schoolcraft, Sec. & Treas. F. D. Mellen, Man. C. M. Baeton, Supt. Charles Steders.

ROCHESTER, N. Y.—Rochester City & Brighton R.R. Co. 22 m, 4-8½ g, 45 lb r, 120 c, 600 h. Pres. Patrick Barry, Sec. C. C. Woodworth, Treas. C. B. Woodworth, Supt. Thomas J. Brower.

Citizens' St. Ry. Co. Pres. Wm. H. Jones, Sec. & Treas. J. E. Pierpont, Supt. S. A. Green.

ROCKFORD, ILL.—Rockford St. Ry. Co. 6 2-5 m, 4-8½ g, 30 lb r, 13 c, 52 h, 16 m. Pres. Anthony Haines, V. Pres. L. Rhodes, Sec. Miss A. C. Arnold, Treas. N. E. Lyman, Supt. Fred. Haines.

ROCK ISLAND, ILL.—Rock Island & Milan St. Ry. Co. 7 m, 4-8½ g, 20-30-42 lb r, 10 c, 7 h. Pres. & Supt. Bally Davenport, Sec. E. H. Gayer, Treas. John Peety.

RONDOUT, N. Y.—Kingston City R.R. Co. 2 4-5 m, 4-8½ g, 40 lb r, 10 c, 40 h. Pres. James G. Lindsay, V. Pres. S. D. Coykendall, Sec. & Treas. John C. Romeyee, Supt. Wm. H. DeGarmo.

SACRAMENTO, CAL.—Sacramento City St. R.R. Co.

SAGINAW, MICH.—Saginaw St. R.R. Co. 2½ m, 4-8½ g, 42 lb r, 10 c, 50 h. Pres. David H. Jerome, V. Pres. Geo. F. Williams, Sec. & Treas. Geo. L. Burrows, Supt. Fred G. Benjamin.

SALEM, MASS.—Salem & Danvers St. Ry. Co. 6 m, 4-8½ g, 35-47 lb r, 15 c, 45 h. Pres. Benj. W. Russell, Sec. G. A. Vickery, Treas. Geo. W. Williams, Supt. W. B. Furgurson, Asst. Supt. David N. Cook.

Naumkeag St. Ry. Co. — m, 4-8½ g, 30-35-45 lb r, 50 c, 140 h. Pres. Chas. Odell, Clerk Joseph F. Hickey, Treas. Henry Wheatland, Supt. Willard B. Ferguson.

SALT LAKE CITY, UTAH.—Salt Lake City R.R. Co. 13 m, 4-8½ g, 20 lb r, 20 c, 115 mu. Pres. John Taylor, Sec. David McKenzie, Treas. James Jack, Supt. Orson P. Arnold.

SAN ANTONIO, TEX.—San Antonio St. Ry. Co. 15 m, 4 g, 30 lb r, 38 c, 125 mu. Pres. A. Belknap, San Antonio, V. Pres. F. W. Pickard, N. Y. City, Treas. I. Withers, San Antonio, Sec. E. R. Norton, Supt. John Robb.

Prospect Hill St. Ry. Co. SANDUSKY, O.—Sandusky St. Ry. Co. 2 m, — g, — lb r, — c, — h. Pres. Chas. B. Ods, Sec. & Treas. A. C. Morse, Supt. Clark Rude.

SAN FRANCISCO, CAL.—California St. R.R. Co. Central R.R. Co. 6 m, 4-8 g, 45 lb r, 31 c, 290 h. Pres. Chas. Main, V. Pres. Jos. Roseberg, Treas. A. J. Gunnison, Sec. C. G. LeBreton, Supt. J. F. Clark.

Clay St. Hill R.R. Co. 1 m, 3-6 g, 30 lb r, 11 c, 12 dummy cars. Pres. Joseph Britton, V. Pres. James Moffit, Treas. Henry L. Davis, Sec. Chas. P. Campbell, Supt. Joseph Britton.

Clay St. Park & Ocean R.R. Co. Market St. Cable Ry. Co. 10 9-10 m, 4-8½ lb r, 137 c, 2 motors, 73 h. Pres. Leland Stanford, V. Pres. Chas. F. Crocker, Treas. N. T. Smith, Sec. J. L. Willcutt.

North Beach & Mission R.R. Co. 8 m, 5 g, 46 c, 400 h. Pres. Jos. Rosenberg, Sec. H. W. Hathorne, Treas. Carl Ahfel, Supt. M. Skelly.

Omnibus R.R. & Cable Co. 8½ m, 5 g, 35-45 lb r, 50 c, 364 h. Pres. Gustav Sutro, V. Pres. D. Callaghan, Sec. G. Ruegg, Supt. M. M. Martin.

Portrero & Bay View R.R. Co. 1½ m, 5 g, 35 lb r, 20 c, 64 h. Pres. Leland Stanford, V. Pres. Chas. Crocker, Treas. N. T. Smith, Sec. J. L. Willcutt.

Sutter St. R.R. Co. 5½ m, 4-11 g, 35-45 lb r, 30 c, 125 h. Pres. R. F. Morrow, Sec. A. K. Stevens, Treas. M. Schmitt, Supt. James McCord.

Telegraph Hill St. Ry. Co. 1,707 ft, 4-11 g, 36 lb r, 3 c, — h. Pres. Gustav Sutro, V. Pres. E. O. Demicke, Sec. & Treas. C. J. Werner.

The City R.R. Co. 5½ m, 5 g, 48 lb r, 73 c, 285 h. Pres. R. B. Woodward, V. Pres. Geo. E. Raum, Sec. M. E. Willis, Treas. J. H. Goodman, Supt. William Woodward.

SAN JOSE, CAL.—San Jose & Santa Clara R.R. Co. First St. & San Pedro St. Depot R.R. Co. Market St. & Willow Glen R.R. Co. North Side R.R. Co. People's R.R. Co.

SANTA BARBARA, CAL.—Santa Barbara St. R.R. Co. 1 m, 3-6 g, 3 c, 8 mu. Pres. A. W. McPhail.

SAUGATUCK, CONN.—Westport & Saugatuck Horse R.R.

SAVANNAH, GA.—City & Suburban Ry. Co. 18½ m, 5 g, 16-30 lb r, 49 c, 110 h, 3 engines. Pres. J. H. Johnson, Asst. J. W. Alley, Treas. E. Schmidt.

Coast Line R.R. Co. 7 m, 5 g, 30 lb r, 17 c, 37 h. Pres. Geo. Parsons, New York, Sec. & Treas. & Gen. Man. R. E. Cobb, Savannah.

SAYRE, PA.—Sayre St. Ry. Co. Pres. Howard Elmer (organization not completed).

SCRANTON, PA.—People's St. Ry. Co. 9½ m, 4-8½ g, 25-32 lb r, 19 c, 70 h. Pres. Wm. Matthews, Sec. & Treas. J. C. Platt.

SEARCY, ARK.—Searcy & West Point R.R. Co. 8 m, 4-8½ g, 20 lb r, 7 c, 6 mu. Pres. A. W. Yarnell, Sec. W. H. Lightle, Treas. Jasper Hicks.

SEATTLE, W. T.—Seattle St. Ry. Co. 3½ m, 4-8½ g, 35 lb r, 5 c, 20 h. Pres. F. H. Osgood, Sec. Geo. Klunear.

SEDALIA, MO.—Sedalia St. Ry. Co. 2½ m, 4-10 g, 54 lb r 6 c 31 h. Pres. Joseph D. Sicher, V. Pres.

Louis Deutsch, Treas. F. H. Guenther, Sec. & Supt. Chas. S. Conrad.

SELMA, ALA.—Selma St. R.R. 2½ m, 18 lb r, 5 c, 8 h. Pres. E. Gilman, Sec. & Treas. J. H. Hollis, Supt. W. Bohlla.

SENECA FALLS, N. Y.—Seneca Falls St. Ry. Co.

SHERMAN, TEX.—Sherman City R.R. Co.

SHREVEPORT, LA.—Shreveport City R.R. Co. 1½ m, 4-4 g, 46 lb r, 6 c, 14 h. Pres. Peter Yourec.

SILVER CLIFF, COL.—Silver Cliff St. R.R. Co.

ST LOUIS, ILL.—St. Louis City Ry. Co. 5 m, — g, — r, 6 c, 8 h, 4 mu. Pres. Fred T. Evans, V. Pres. D. A. Magee, Sec. & Treas. F. T. Evans.

SOUTH CHICAGO, ILL.—Chicago Horse & Dummy R.R. 5 m, 4-8½ g, — lb r, — c, — h. Pres. D. L. Huff, Treas. A. C. Calkins, Sec. E. R. Bliss. [Not in operation.]

SOUTH PUEBLO, COL.—Pueblo St. R.R. Co.

SPRINGFIELD, ILL.—Citizens' St. R.R. Co. 9½ m, 3-6 g, 20-36 lb r, 23 c, 100 h. Pres. J. H. Schrick, Treas. Frank Reisch, Sec. Chas. F. Harman. Springfield City Ry. Co.

SPRINGFIELD, MASS.—Springfield St. Ry. Co. 4-8½ g, 35-40 lb r, 28 c, 115 h. Pres. John Olmstead, Auditor L. E. Ladd, Clerk Gideon Wells, Treas. A. E. Smith, Supt. F. E. King.

SPRINGFIELD, MO.—The People's Ry. Co. of Springfield, Mo. 3½ m, 4-10 g, 33 lb r, 5 c, 30 h. Pres. J. C. Cravens, Sec. Benj. N. Massey, Treas. Chas. Sheppard, Supt. H. F. Denton.

Springfield R.R. Co. 2 m, 30-40 lb r, 4-8½ g, 7 c, 19 h, 15 mu. Pres. G. W. Rogers, St. Louis, Sec. & Treas. B. F. Hobart, Supt. J. A. Stoughton, No. Springfield.

SPRINGFIELD, O.—Citizens' St. R.R. Co. 10 m, 4 g, 29 c, 135 h. Pres. D. W. Stroud, V. Pres. A. S. Bushnell, Treas. Rose Mitchell, Sec. F. S. Penfield, Supt. W. H. Hanford.

STATEN ISLAND, N. Y.—Staten Island Shore Ry. Co.

ST. CATHARINE'S, ONT.—St. Catharine's, Merlinton & Thorold St. Ry. Co. 5½ m, 4-8½ g, 30 lb r, 7 c, 30 h. Pres. E. A. Smythe, Sec. S. R. Smythe, Supt. E. A. Smythe.

ST. JOSEPH, MO.—Citizens' St. R.R. Co. 3 m, 4-8½ g, 28 lb r, 14 c, 52 mu. Pres. Richard E. Turner, Sec. & Treas. Arthur Kirkpatrick, Supt. John F. Meriam.

Frederick Ave. Ry. Co. 1½ m, 3 g, 16 lb r, 6 c, 16 h. Pres. Thomas E. Tootle, V. Pres. Winslow Judson, Sec. W. D. Motter, Treas. Thomas W. Evans, Supt. S. Rowen.

St. Joseph & Lake St. R.R. Co.

Union Ry. Co.

ST. LOUIS, MO.—Baden & St. Louis R.R. Co. 3½ m, 4-10 g, — lb r, 7 c, 21 h. Pres. George S. Case, V. Pres. William Z. Coleman, Supt. J. H. Archer.

Benton & Bellefontaine Ry. Co. 7½ m, 4-10 g, 45 lb r, 29 c, 200 h. Pres. J. G. Chapman, Sec. Robert McCulloch.

Class Avenue & Fair Grounds Ry. Co. 8 m, 4-10 g, 38 lb r, 37 c, 290 h. Pres. W. R. Allen, V. Pres. Geo. W. Allen, Sec. Treas. & Supt. G. G. Gibson, Cashier O. H. Williams.

Citizen's Ry. Co. Jefferson Ave. Ry. Co. Lindell Ry. Co. 13½ m, — g, — r, 65 c, 475 h. Pres. John H. Maquon, V. Pres. John H. Lightner, Sec. & Treas. Geo. W. Baumhoff, Supt. Jos. C. Llewellyn.

Missouri R.R. Co. Mound City R.R. Co. Northern Central.

Springfield Ry. Co. 2 m, 4-8½ g, 25-40 lb r, 7 c, 40 h. Pres. C. W. Rogers, St. Louis, Sec. & Treas. B. F. Hobart, Springfield, Supt. J. A. Stoughton, No. Springfield, Asst. Supt. Frank B. Smith, No. Springfield.

Southern Ry. Co. 7 4-5 m, 4-10 g, 35-52 lb r, 49 c, 250 h. Pres. E. R. Coleman, Sec. J. S. Minary, Man. W. L. Johnson.

St. Louis R.R. Co. and the People's R.R. One management. 11 m, 4-10 g, 38-44 lb r, 58 c, 375 h. Pres. Chas. Green, Sec. & Treas. John Mahoney, Supt. Patrick Shea.

Tower Grove & Lafette R.R. Union Depot R.R. Co. Union R.R. Co.

STONEHAM, MASS.—Stoneham St. R.R. Co. 2½ m, 4-8½ g, 33 lb r, 10 c, 28 h. Pres. A. V. Lynde, Melrose, Treas. & Clerk Lyman Dyke, Supt. John Hill.

ST. PAUL, MINN.—Wabash St. Ry. Co. St. Paul City Ry. Co. 25 m, 4-8½ g, 80 c, 150 h, 294 mu. Pres. Thos. Lowry, V. Pres. C. G. Goodrich, Sec. J. H. Randall, Treas. Clinton Morrison, Supt. A. L. Scott.

STERLING, ILL.—Sterling St. Ry. Co.

STILLWATER, N. Y.—Stillwater & Mechanics ville St. Ry. Co. 4½ m, 4-8½ g, 25-30 lb r, 3 c, 6 h. Pres. S. Rowley, V. Pres. W. L. Denison, Sec. H. O. Bailey, Mechanicsville, Treas. E. N. Smith.

STROUDSBURG, PA.—Stroudsburg Passenger R.R. Co. 1 4-5 m, 4 8½ g, 28-30 lb r, 3 c, 9 h. Pres. & Treas. J. Lantz, Sec. Jacob Houser.

SYRACUSE, N. Y.—Syracuse & Onondaga R.R. Co. 2 3-5 m, 4-8 g, 28-47 lb r, 9 c, 18 h. Pres. Peter Burns, Sec. & Treas. Lyman C. Smith, Supt. Henry Thompson.

Central City Ry. Co. 2½ m, 4-8½ g, 40 lb r, 12 c, 37 h. Pres. George N. Kennedy, V. Pres. Daniel Pratt, Sec. & Treas. James Barnes, Supt. George Crampton.

Fifth Ward R.R. Co. 2½ m, 4-8½ g, 35-56 lb r, 8 c, 30 h. Pres. P. B. Brayton, Sec. & Treas. O. C. Potter, Supt. Hugh Purnell.

Genesee & Water St. R.R. Co. and Fourth Ward R.R. Co. 4 m, 4-8½ g, 18-30 lb r, 10 c, 35 h. Pres. Robt. G. Wynkoop, Sec. & Treas. Geo. J. Gardner, Supt. W. J. Hart.

New Brighton & Onondaga Valley R.R. Co. 1½ m, 4-8 g, 16-35 lb r, 2 c, 4 h. Pres. Matthias Britton, Sec. T. W. Meacham, Treas. J. H. Anderson, Supt. J. H. Anderson.

Syracuse & Geddes Ry. Co. 2 m, 4-8½ g, 35-45 lb r, 10 c, 32 h. Pres. R. Nelson Gere, Sec. & Treas. Rasselas A. Bonta, Supt. Wm. J. Hart.

TAUNTON, MASS.—Taunton St. Ry. Co. 4½ m, 4-8 g, 14 c, 44 h.

TERRE HAUTE, IND.—Terre Haute St. Ry. Co.

4½ m, 4-8½ g, 28 lb r, 16 c, 48 h. Pres. T. C. Buntin, V. Pres. Josephus Collett, Sec. John R. Haagen, Supt. John T. Shriver.

TEXARKANA, ARK.—Texarkana St. Ry. Co.

TOLEDO, OHIO.—Toledo Consolidated St. Ry. Co. 17 m, 4-8 g, 42 lb r, 37 c, 180 h. Pres. John E. Bailey, Sec. A. E. Lang. Adams Street Ry. Co.

Metropolitan St. Ry. Co. 8½ m, 3 g, 29 c, 88 h. Pres. Jno. J. Shpherd of Cleveland, Treas. H. E. Wells of Cleveland, Gen. Man. T. F. Shpherd, Supt. Jno. A. Watson.

Monroe Street R.R. The Central Passenger R.R. Co. of Toledo, O. 8 m, 3 g, 27 lb r, 17 c, 70 h. Pres. F. E. Seagrave, V. Pres. & Treas. James Paznecr, Sec. Chas. F. Parkis, Supt. A. R. Seagrave.

Toledo Street R.R. Co. TOPEKA, KAN.—Topeka City Ry. Co. 9 m, 4 g, 25-48 lb r, 25 c, 90 h. Pres. Joab Mulyane, V. Pres. D. W. Stormont, Sec. & Treas. E. Wildes, Supt. Jesse Shaw.

TORONTO, CAN.—Toronto St. Ry. Co. 18 m, 4-10½ g, 30 lb r, 136 c, 670 h. Pres. Frank Smith, Sec. James Green, Supt. John J. Franklin.

TRENTON, N. J.—Trenton Horse R.R. Co. 1½ m, 5-2 g, 43-47 lb r, 10 c, 31 h. Pres. Gen. Lewis Perrine, Sec. & Treas. Lewis Perrine, Jr., Supt. Thomas Silorris. City Ry. Co. 3 m, 5-2 g, 45 lb r, 15 c, 69 h. Pres. Adam Extolr, V. Pres. W. H. Skinn, Sec. H. B. Howell, Treas. & Mang. Director Chas. J. Bramford.

TROY, N. Y.—Cortland & Homer R.R. Co. 4 m, 4-8½ g, 25-30 lb r, 2 c, — h. Pres. C. H. Garrison, Troy, V. Pres. E. A. Fish, Cortland, N. Y., Treas. Jas. M. Milen, Cortland, Sec. S. E. Welch, Cortland.

Troy & Albia Street Ry. Co. 3½ m, 4 g, 35-45 lb r, 9 c, 41 h. Pres. Thos. A. Knickerbocker, Sec. & Treas. Theo. E. Haselhurst, Supt. W. R. Bean.

Troy & Lansingburgh R.R. Co. 20½ m, 4-8½ g, 47 lb r, 91 c, 466 h. Pres. William Kemp, V. Pres. Charles Clemmishaw, Sec. & Treas. Joseph J. Haagen, Supt. Leander C. Brown.

URBANA, ILL.—Urbana R.R. Urbana & Champaign St. Ry. Co. 2 m, 4-8½ g, 33 lb r, 4 c, 20 h. Pres. Wm. Park, Sec. & Treas. Frank G. Jaques, Supt. W. Park.

UTICA, N. Y.—Utica, Clinton & Binghamton St. R.R. 7½ m, 4-8½ g, 43-56 lb r, 17 c, 82 h. Pres. Isaac Maynard, Sec. & Treas. Robt. S. Williams, Supt. Roger Rock.

The Utica & Mohawk R.R. Co. 2½ m, 4-8½ g, 25-40 lb r, 9 c, 5 h. Pres. Chas. W. Hutchinson, V. Pres. Nathan S. Haynes, Sec. Geo. M. Weaver, Treas. Joshua W. Church.

VAITSBURGH, N. J.—Newark, So. Orange, Ferry St. & Hamburg Place R.R. Co.

VALEJO, CAL.—Valejo St. Ry. Co. VICKSBURG, MISS.—Vicksburg St. Ry. Co. VINNENNES, IND.—Vincennes St. Ry. Co.

WACO, TEX.—Waco St. Ry. Co. 5 m, 4-8 g, 14-18 lb r, 9 c, 44 h. Pres. E. Rotan, Sec. & Treas. W. R. Kellum, Supt. J. W. Sedbury.

WALTHAM, MASS.—Waltham & Newton St. Ry. Co. 3½ m, 4-3 g, 30 lb r, 6 c, 14 h. Pres. R. E. Robbins, Sec. & Treas. Henry Bond.

WASHINGTON, D.C.—Capital, No. O. St. & So. Washington R.R. Anacostia & Potomac River Ry. Co. 3 m, 4-8 g, 37 lb r, 9 c, 24 h. Pres. H. A. Griswold, Sec. Edward Temple, Treas. T. E. Smithson.

Columbia R.R. Co. of the District of Columbia. 2½ m, — g, — lb r, 19 c, 56 h. Pres. H. A. Willard, Sec. & Treas. Wm. H. Clayette, Supt. Thos. E. Benson.

Metropolitan R.R. Co. 2½ m, 4-8 g, 38 lb r, 90 c, 400 h. Pres. George W. Pearson, V. Pres. A. A. Wilson, Sec. & Treas. William M. Morse, Supt. L. W. Emmart.

Washington & Georgetown R.R. Co. 10 m, 4-8 g, 42 lb r, 161 c, 750 h. Pres. H. Hurt, Sec. & Treas. C. M. Koonce, Gen. Supt. C. C. Sallies.

WATERFORD, N. Y.—Waterford & Cohoes R.R. Co. 2 m, 4-8½ g, 45 lb r. Pres. Thos. Breslin, Sec. & Treas. C. B. Ormsby. (Leased by the Troy & Lansingburgh R.R. Co.)

WEST HURON, CONN.—New Haven & West Haven R.R. Co.

WESTPORT, CONN.—Westport & Saugatuck Horse R.R.

WICHITA, KAN.—Wichita City Ry. Co. 6 m, 8 c Pres. J. W. Ground, Sec. & Mangr. E. R. Powell.

WHEELING, W. VA.—Citizens Ry. Co. Wheeling & Elm Grove R.R. 7 m, 4-8½ g, 30 lb r, 12 c, 4 Baldwin Motors. Pres. J. D. DuBois, Sec. E. J. Rutter.

WILKESBARRE, PA.—Wilkesbarre & Kingston Pass. R.R. Wilkesbarre & Ashley Passenger R.R. Co.

Coalville Passenger R.R. 2½ m, 4-8½ g, 20-34 lb r, 4 c, 10 h. Pres. Chas. A. Miner, Sec. & Treas. George Loveland, Supt. Albert G. Orr.

WILLIAMSPORT, PA.—Williamsport St. R.R. Co.

WILMINGTON, DEL.—Front & Union St. Passenger Ry. Co.

Wilmington City Ry. Co. 4½ m, 5-2½ g, 45 lb r, 20 c, 82 h. Pres. W. Canby, Sec. & Treas. John F. Miller, Supt. Wm. H. Burnett.

WINDSOR, CAN.—Sandwich & Windsor Passenger R.R. Co.

WINNIPEG, MANITOBA, CAN.—The Winnipeg St. Ry. Co. 5 m, 4-8½ g, 35 lb r, 13 c, 75 h. Pres. Duncan MacArthur, Sec. & Mangr. Albert W. Austin, Supt. Geo. A. Young.

WINONA, MINN.—Winona City Ry. Co. 4 m, 3-6 g, 27 lb r, 10 c, 39 h. Pres. John A. Mathews, V. Pres. B. H. Langley, Sec. & Treas. C. H. Porter.

WOBURN, MASS.—No. Woburn Horse R.R. 2½ m, 4-8 g, 4 c, 4 h. Pres. & Treas. John Carter, Sec. J. G. Maguire, Supt. Dexter Carter.

**WORCESTER, MASS.**—Worcester St. Ry. Co. 5½ m, 4-8½ g, 45 lb r, 19 c, 100 h. Pres. Geo. H. Seeley, N. Y. City, V. Pres. Nathan Seeley, N. Y. City, Treas. & Supt. Harry S. Searls, Worcester.  
**YOUNGSTOWN, O.**—Youngstown St. R. R. Co.  
**ZANESVILLE, O.**—Bellaire, Chillcothe & Canton.  
 Zanesville & McIntire St. Ry. Co. 3 m, 3-6 g, 38 lb r, 12 c, 54 m. Pres. J. Bergen, Sec. W. C. Townsend, Treas. T. B. Townsend.

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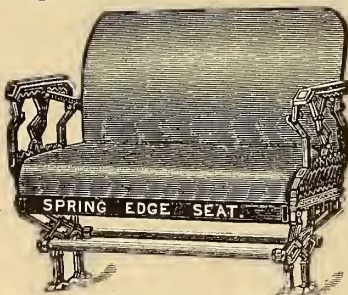
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Also sole makers of the **ELLIPTIC (COBB PATENT) STEEL SPRINGS.** SEND FOR CATALOGUE.

NOS. 48 & 50 NORTH SIXTH STREET, PHILADELPHIA, PA.



**Parrott Varnish Co.**

**FINE COACH AND CAR VARNISHES.**

Bridgeport, Conn., U.S.A.

**THE STREET RAILWAY LUBRICANT "VICTOR"**

Will last FOUR TIMES AS LONG, and is CHEAPER and MORE ECONOMICAL than Oil. Samples free on application.

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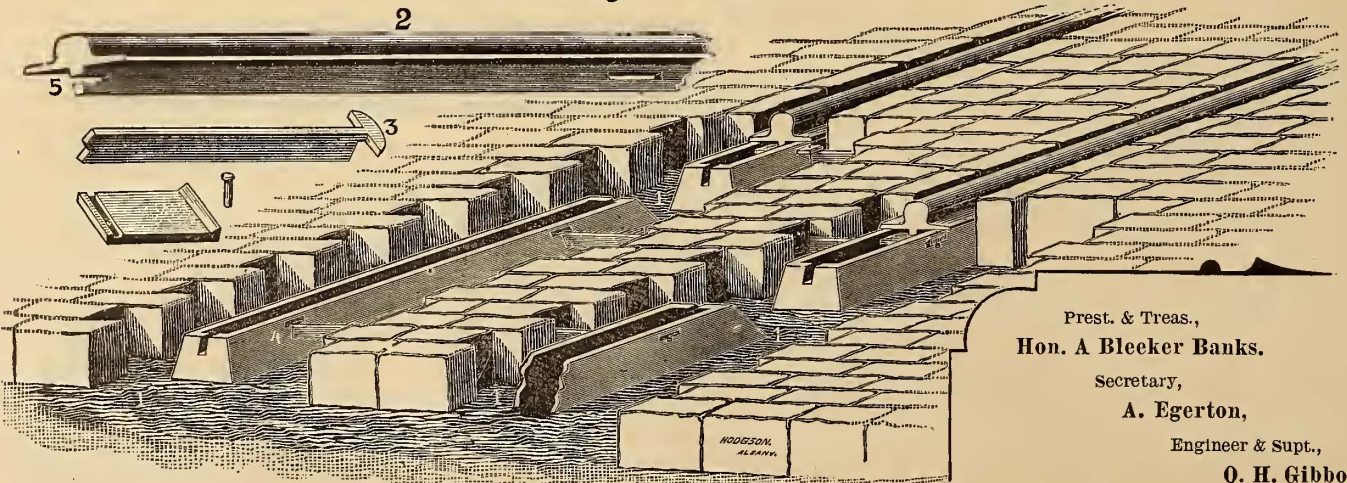
109 WOOD ST., PITTSBURGH, PA.

Used by Pittsburgh Transverse Railway Co.

**The Metallic Street Railway Supply Company,**

GIBBON'S PATENT,

Albany, N. Y.



Prest. & Treas., **Hon. A. Bleeker Banks.**

Secretary,

**A. Egerton,**

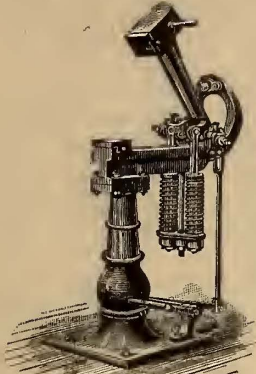
Engineer & Supt.,

**O. H. Gibbon.**

Cheapest, quickest, laid, and most durable track known. Dispenses with all timbers, butts, spikes, knees, etc. Estimates and particulars sent on application.



# THE STANDISH FOOT-POWER HAMMER



Is specially adapted to making light forgings, for welding in dies having impressions cut to the shape of the work required. They are superior to power hammers, as the hammer is under perfect control as the Smith's hand hammer, and are used in the carriage business for welding Dashes, Shifting Rails, Top Props, shaping and forming ALL SMALL WORK equal to drop forging, and are in use by the principal manufacturers of the United States. Send for circulars. Address,

The Capital City Machine Works,  
COLUMBUS, O.

Patented July 10, 1883.

# THE NATIONAL CAR HEATER,



Especially Adapted  
FOR  
Warming Horse  
OR  
Street Rail Road  
CARS.

Brick Lined, Rotating  
and Dumping Grate,  
Safety Door Catch.

For Neatness of Appearance, Compactness in Space, and Safety it has no equal.

These Car Heaters are in use on Railroad Lines in different Cities and Towns of the Union, and are giving entire satisfaction.

Sole Manufacturers,

**NATIONAL  
Stove Co.,**  
243 Water St.,  
NEW YORK CITY

# Perfection in Car Heating AT LAST.

## Vandemark's Improved Car Heater.

This Heater occupies no available space, is entirely free from ash, dust, dirt and odor; is absolutely safe, and the least expensive of any yet introduced, as has been demonstrated by actual trial.

I am prepared to obligate by contract to supply street cars with heaters that will meet the requirements to perfection in point of safety, efficiency and economy.

**A. B. VANDEMARK,**  
1584 BROADWAY, N. Y. CITY.

## F. W. DEVOE & CO.

(Established 1852),

FULTON ST., cor of WILLIAM, NEW YORK,

MANUFACTURERS OF

# COACH AND CAR COLORS

GROUND IN JAPAN.

For these colors we received the highest award, the Gold Medal, at the National Exposition of Railway Appliances in Chicago, last year.

## SPECIAL SHADES MADE TO ORDER.

We furnish special body colors to Pennsylvania R.R., New York Central New York & New Haven, Lehigh Valley, New Jersey Central and other large Railroads.

# FINE VARNISHES AND JAPANS

FOR COACHES AND CARS,

Wood Fillers, Wood Surfacer, Wood Stains, Hard Oil Finish.

Manufacturers of FINE BRUSHES for painting, varnishing, striping, etc.

## ARTISTS' MATERIALS.

Tube Colors, Artists' Brushes, Drawing Paper.

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Mathematical Instruments, Theodolites, Transits, Cross Section Papers.

Illustrated Catalogues of 250 pages and 800 Illustrations on request.

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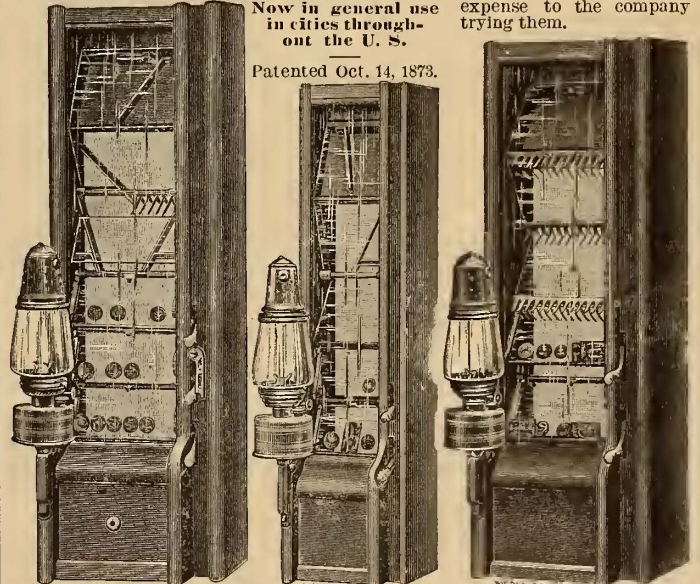
WHITE LEAD, COLORS IN OIL, DISTEMPER COLORS, PURE READY MIXED PAINTS,

**COFFIN, DEVOE & CO., 176 Randolph Street, CHICAGO.**

Ornamental to any car. Reduction in price where 2 boxes are placed in one car. **TOM L. JOHNSON'S IMPROVED FARE BOX.** Roads equipped with boxes on trial, and if not satisfactory, returned without any expense to the company trying them.

Now in general use in cities throughout the U. S.

Patented Oct. 14, 1873.



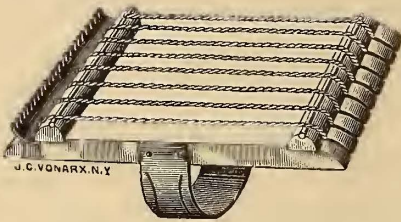
BOX NO. 1.

CHARIOT PATTERN.

BOX NO. 2.

One of the principal merits of these Fare Boxes over all others, consists in the fact that the fares are not turned out of sight at once by the drivers, leaving nothing but the bare word and memory of the parties as evidence of the payment, thereby making it easy for deception to be practiced, even though an officer is on the car, and is endeavoring to see that the driver is faithfully performing his duties. They are so constructed that the fares are kept in sight from one end of the road to the other, and at any point on the line an officer of the company, or indeed any other person, can tally passengers with the fares. The drops can easily carry from 75 to 80 fares, and can be counted without mistake, and counterfeit money can be easily detected. These boxes are very simple in construction, being cleared, when required, in five minutes, whereas any other box takes a much longer time. The glass fronts and drops render them so transparent that a person sitting in the further end of car can readily count the fares and make the tally, without making himself conspicuous in the matter, if desirable. They are lighted from an outside lantern, (which is only on the car at night, and should be taken off during the day,) giving an excellent light, for the fares can be seen almost as plain as by day. When the box is put in a car it can not be taken out or tampered with, unless the keys are obtained from the office, and can not be robbed without violence. Special attention given to correspondence on the subject of street railway construction, equipment and operation. Address all correspondence to A. A. ANDERSON, with Tom L. Johnson, Indianapolis, Indiana.

# JAY-EYE SEE Patent Curry Comb.



Best in the World. Can't Scratch or Hurt the horse. Cleans off mud and sweat with ease and rapidity. Most Durable and Lightest Comb made. Give it a trial. Needed in all Car Stables.

**MUNCIE NOVELTY CO., Muncie, Ind.**

**MALTBY, CURTISS & CO., O. S. CHAMBERLAIN,**  
 No. 20 WARREN ST., New York, 55 DEARBORN ST., Chicago,  
 Eastern, Southern & Export Agents. Gen. Western Agent.

## N. J. Car Spring and Rubber Co.,

Cor. WAYNE and BRUNSWICK STS.,  
 JERSEY CITY, N. J.,

MANUFACTURERS OF

### RUBBER CAR SPRINGS

OF EVERY STYLE AND SHAPE,

CUSHIONS, BRAKE PADS, RUBBER MATTING  
 and STEP PLATES, HOSE, DOOR STOPS, &c.

Being one of the oldest manufacturers in the business, we have a MOST COMPLETE assortment of moulds.

WRITE FOR PRICES.

## THE BRYDEN FORGED HORSE SHOE WORKS

(Limited),

Catasauqua, Lehigh County, Penn.,

Are making a plain, narrow-webbed shoe, with beveled surfaces for Horse Railroad work. It is "FORGED" from the very best Iron, and is tougher and harder than any shoe heretofore made, and will be sold to consumers at a small advance on the prices charged for ordinary mill shoes. They also make a Calked Shoe with a Square Toe, just the same as hand made, and the company warrants them to wear as long as the very best hand work.

Among others who are using this Shoe, are the

- Third Avenue Railroad Co., New York.
- Eighth Avenue Railroad Co., New York.
- Twenty-third Street Railroad Co., New York.
- Christopher Street Railroad Co., New York.
- Brooklyn City and Newtown Railroad.
- Bushwick Railroad Co., Brooklyn, N. Y.
- Crosstown Railroad Co., Brooklyn, N. Y.
- Coney Island and Brooklyn Railroad Co., Brooklyn, N. Y.
- North Hudson County Railroad Co., Hoboken, N. J.
- Jersey City and Bergen Railroad Co., Jersey City, N. J.
- Ridge Avenue Passenger Railway Co., Philadelphia, Pa.
- Citizens' Passenger Railway Co., Philadelphia, Pa.
- Buffalo Street Railway Co., Buffalo, N. Y.
- New Orleans City and Lake Railroad.
- Philadelphia Traction Company, Philadelphia.
- Second and Third streets Railroad Company, Philadelphia.
- Atlantic Avenue Railroad Company, Brooklyn, N. Y.

Also fully prepared to furnish any kind, weight or shape of shoe desired. Estimates on cost of producing such special patterns will be furnished on receipt of model, with estimate of the probable number of kegs required.

The Rates of Freight are as Low from their Factory West and East AS THE LOWEST.

A Mild Tough Steel Shoe supplied at a small advance over Iron Shoes.

## "PAY HERE." Fare Boxes and Change Receptacles for Street Cars.

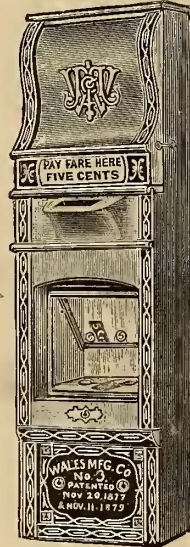
OUR NEW FARE BOX NO. 3.

The following are some points of superiority in this box over others:

SIMPLICITY OF CONSTRUCTION, QUICKNESS AND CONVENIENCE OF CLEANING, SECURITY OF MONEY DRAWER, BEAUTY OF FINISH, and MUCH CHEAPER IN PRICE.

We have just added to this box a very valuable improvement, viz., a small mirror placed back of first slide or rest, which presents to driver's view the back side of fare as well as front, when resting on first rest. He can by this quickly detect any spurious or mutilated coin or ticket that may be split and put in box. It often happens in all Fare Boxes, to the annoyance of driver and passenger, when several fares are resting on first slide, one or more coins are liable to be

behind a ticket, and the driver cannot see them, and quite often a passenger is "rung up," when his fare is concealed behind the ticket, from the driver. This arrangement gives driver view of both sides of fare.



Box No. 3.  
 Front or Passengers' View.



CHANGE RECEPTACLE.

The only satisfactory arrangement in use for making change with the driver.

Descriptive and illustrated circular on application. Get our prices before buying.



Box No. 3.  
 Back or Driver's View.

WALES MFG. CO., 76 & 78 E. Water St., Syracuse, N. Y.

## Gourdier's Steel, Rubber Cushioned BAR HORSE SHOE.

For Street Railway Horses.

A POSITIVE CURE FOR LAMENESS.

It saves Horseflesh. Its use Guarantees Soundness.



Address

It furnishes a proper support for the frog; ensures better health, more speed and greater endurance, and is more economical than any other shoe. It is theoretically the only true shoe for horses, and is the result of over thirty-five years practical experience and observation with horses. It is recommended by many eminent veterinary surgeons and endorsed by numerous metropolitan railway lines where it is in constant use. The Gourdier shoes are made in fifteen sizes.

DIRECTIONS. Pare the foot ready for shoeing; make a careful tracing of the hoof on paper, and mail it to us. We will furnish sample shoes to R. R. companies for trial, free.

**Henry Gourdier & Co.,**  
 1584 Broadway, N. Y.

**WM. P. CRAIG,**  
**Street Railway Builder and dealer in Railway Supplies.**

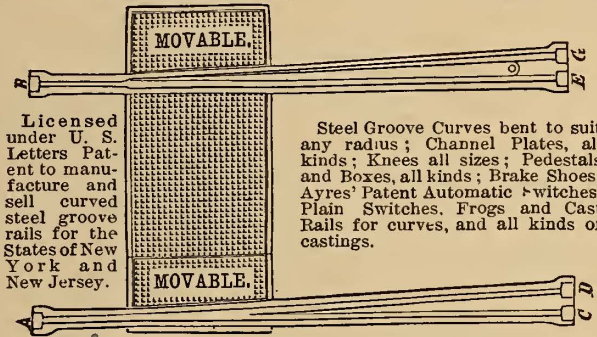
OLD ROADS RE-LAID, GRADING, PAVING, &c.  
 Special attention given to laying Switches, Curves, Turnouts, Connections and Turn-tables; also Building Tracks for Excavation, Grading, Mining and Factories.  
 Office, 95 LIBERTY STREET, - NEW YORK.

**STEEL STREET RAILS.**  
 The Pittsburgh Bessemer Steel Co., Limited.  
 48 Fifth Ave., Pittsburgh, PA.

Section No. 17  
 46 lbs. per Yard

**A. AYRES,**  
**Manufacturer and Patentee.**

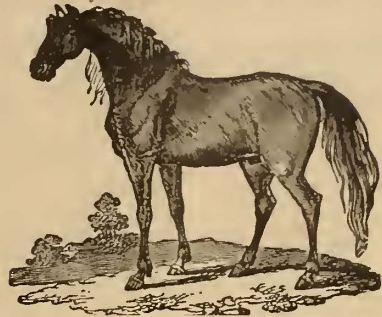
Send me full size section of rails to be used at points A, B, C, D, E, G.  
**No. 625 TENTH AVENUE, NEW YORK.**



Licensed under U. S. Letters Patent to manufacture and sell curved steel groove rails for the States of New York and New Jersey.

Steel Groove Curves bent to suit any radius; Channel Plates, all kinds; Knees all sizes; Pedestals and Boxes, all kinds; Brake Shoes; Ayres' Patent Automatic Switches, Plain Switches, Frogs and Cast Rails for curves, and all kinds of castings.

**EUROPEAN COLIC CURE.**



A speedy and sure cure for Colic--has saved hundreds of horses where all other remedies have failed. Horse need not be run or trotted around to start the wind. Let him stand or lie down as he feels inclined and he will be ready for work almost immediately after recovery. A cure guaranteed in ninety-nine cases in a hundred. Endorsed by the leading street railway companies of the country, some of which we append.

DECATUR, ILL., Oct. 2, 1884.  
 MESSRS. JONES & ROACH, Chicago, Ill.

I have used your Colic Cure for my horses and mules on my street car lines and found it the best and surest medicine I have ever used. I have not lost a horse since I commenced its use. It gives relief in a short time after it is taken. I can cheerfully recommend it as a sure relief if given in time. I keep it constantly on hand.

Truly yours,  
 FRANKLIN PRIEST,  
 President Decatur Street R. R.

MESSRS. JONES & ROACH:

Gentlemen: I cheerfully recommend your European Colic Cure for horses as being the best that I have ever used. When once introduced no horse owner can well afford to be with-

out it. I hope you will meet with the success your cure deserves.

Truly yours,  
 VALENTINE BLATZ,  
 Per H. Lieb, Manager.

OFFICE OF NORTH HUDSON COUNTY RAILWAY CO.  
 HOBOKEN, N. J., Oct. 4, 1884.

Gentlemen: It gives me pleasure to say that I can heartily recommend your European Colic Cure to all horse owners, from a personal knowledge of its curative qualities. I have used it in our stables, containing about six hundred horses, and have always found it to be beneficial. Yours very truly,  
 ALBERT SAILLET,  
 Foreman and Veterinary Surgeon for the North Hudson County Ry. Co.

Sample Bottles Furnished Street Railway Companies Gratis.

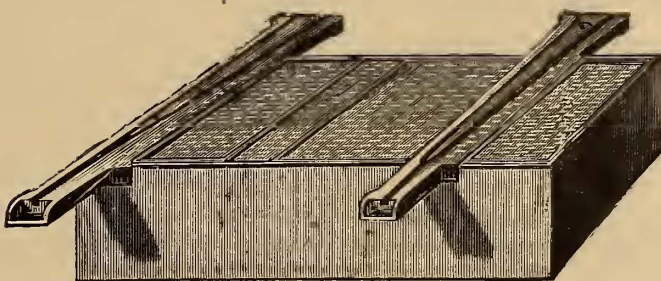
For further information, prices, etc., address

**JONES & ROACH, 259 Fremont Street, Chicago.**

**M. M. White & Co.,**

**531 WEST 33d STREET,**

**NEW YORK.**



OWNERS AND BUILDERS OF

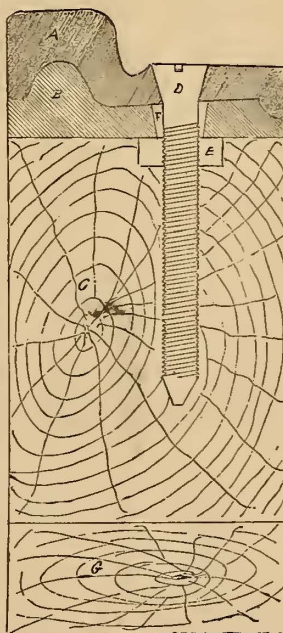
**H. DOUGLASS'**

**Patent Automatic Switch**

**FOR STREET RAILROADS.**

**WRIGHT'S**

**PATENT JOINT FASTENING.**



The accompanying cut shows a cross section through joint. A is the rail, B the joint chair, C the stringer, D the patent screw fastening, E the nut, F a slot in chair allowing rails to contract and expand. The chair cannot settle and the rail ends are held level with each other, preventing the many evils of ordinary construction.

For Further Particulars Address

**AUGUSTINE W. WRIGHT,**  
**NORTH CHICAGO CITY RAILROAD,**

**CHICAGO, ILL.**

**STREET RAILWAY WHEELS AND TURNOUTS.  
Graded Stable Gutter with Straight or Curved Cover.**



Descent 1/4 in. per foot. Pieces 5 feet lengths. Short pieces furnished to suit any length. Spouts to connect with Sewer, &c.

**BOWLER & CO., Cleveland, Ohio.**

**THE AJAX METAL CO.**

**WE CLAIM FOR AJAX METAL.**



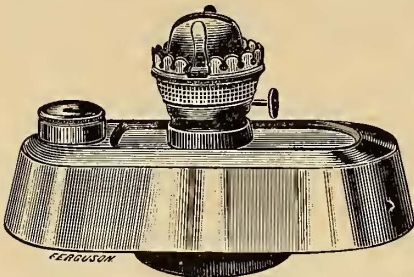
TRADE MARK.	25 to 50 per cent. more mileage.
PATENTED 1883.	33 1-3 " greater tensile strength.
	100 " greater crushing strength.
	20 " less friction and wear upon journals.
	85 " less hot journals than any known Bronze named or unnamed.

Costs no more than copper, and tin or gun metal.

**AJAX METAL CO.,**

2040 No. Tenth Street, PHILADELPHIA, A.

**CLUTE PATENT  
DOUBLE-BOTTOM  
STREET CAR LAMP.**

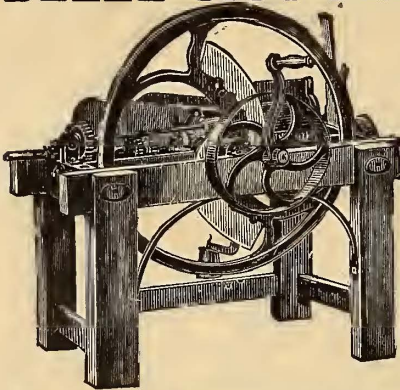


Is one that assures Safety, Durability, and is perfect in regard to Leakage.

**GEO. M. CLUTE, Sole Manufacturer.**

Also Dealer in Car Reflectors, Chimneys, Burners, &c., WEST TROY, N. Y.

**THE BELLE CITY FEED CUTTER**



IS THE Strongest, Most Durable, and on the whole it is the

**BEST FEED CUTTER IN THE WORLD.**

For Street-car Barns it has no equal. Write for Reference, Circular, &c., to

**THE BELLE CITY M'FG CO.,**

RACINE, WIS., U. S. A.

**F. W. JESUP & COMPY.,  
67 LIBERTY ST., NEW YORK,  
Street Railway Supplies,  
OF EVERY DESCRIPTION.**

Steel Rails, all patterns; Cars; Automatic Switches; Turntables; Curved Rails; Channel Plates; Frogs; Crossings and other Track Castings, Knees, &c. Countersunk Spikes, specially adapted for Centre-bearing Rails.

**Iron City Foundry and Machine Works.**

Cast Iron Turnouts, Crossings, Switches and all kinds of Car Castings. SOUTHERN STREET RAILWAY WORK A SPECIALTY.

**AIKIN & LIGHTON,  
BIRMINGHAM, ALABAMA.**

The "BROADWELL CAR STARTER," having been subjected to practical tests, is now placed on the market at a very low price.

**C. B. BROADWELL,**

169 Laurel Street, - New Orleans, La.

**PUGH & RUSSELL,  
Manufacturers and Dealers in  
STREET RAILWAY SUPPLIES**

Of every Description, for Home and Export Trade.

Stewart Building, Broadway, Reade and Chambers Sts., New York.

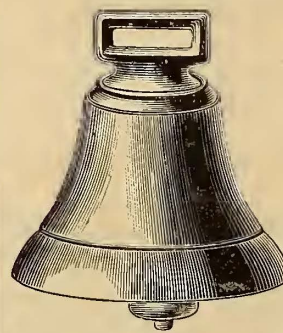
P. O. Box 3524.

**THE BARTON BELL CO.,**

East Hampton, Conn.,

MANUFACTURERS OF

Common and Pure Bell Metal  
**HORSE CAR BELLS.**



Malleable Iron Loop and Clapper Holder (Extra strong and durable.)

Samples and prices sent on application.

**THE BEMIS CAR BOX CO.,**

Light Draft, Easy Riding, Durable Economical. Brasses are warranted for 10 years and Journal for 20 years.



30 TAYLOR STREET,  
SPRINGFIELD, MASS.

P. O. Box 143.

Requires oiling or inspecting but once in 12 months.

Boxes are positively dust proof.

MANUFACTURERS OF

**THE BEMIS PATENT JOURNAL BOX.**

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INCORPORATED 1875.

# BROWNELL & WIGHT CAR COMPANY,

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BUILDERS OF

## Street Cars

OF EVERY STYLE AND SIZE,

For Horse, Cable or Other Motive Power.

EXCLUSIVE MANUFACTURERS OF

## BROWNELL'S PATENT COMBINATION CARS

FOR SUMMER AND WINTER SERVICE.

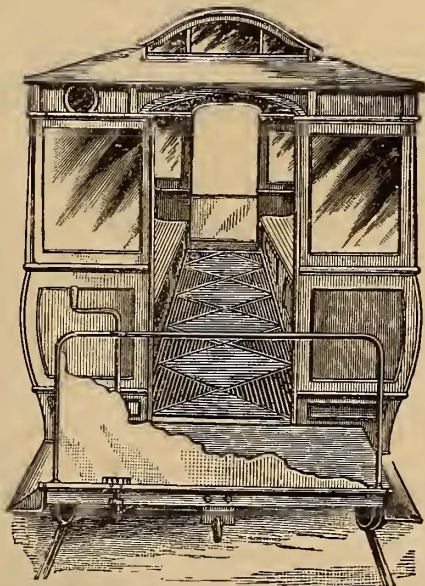
ESTABLISHED 1869.

## LEWIS'

## Improved Sectional Diamond and Plain CAR MAT

IS THE

LIGHTEST,  
STRONGEST,  
CHEAPEST,  
HANDSOMEST,  
EASIEST  
CLEANED AND  
MOST DURABLE  
MAT FOR RAIL-  
WAY CARS  
EVER DESIGNED



Used extensively  
all over the World.

**SAMUEL LEWIS, Patentee & Sole M'r,**

12 to 18 LORIMER STREET (near Broadway),

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## J. M. JONES' SONS,

AGENTS,

## Street Railway Car Builders

## WEST TROY,

NEW YORK.

## PENNSYLVANIA

## STEEL COMPANY,

MANUFACTURERS OF

## STEEL RAILS

Of T patterns, weighing from 16 to 76 lbs. per yard.  
CENTRE BEARING Street Patterns, 42 to 60 lbs. per  
yard, TRAM Street Patterns 45 to 47 lbs. per yard,  
and Street Patterns for STEAM ROADS.

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NEW YORK OFFICE, - 160 Broadway.

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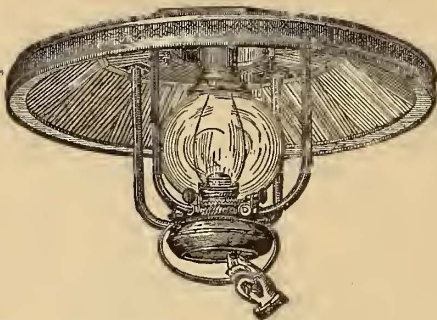
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**A. WHITNEY & SONS,  
CAR WHEEL WORKS,  
PHILADELPHIA, PENN.**

**CAST CHILLED WHEELS,  
AXLES AND BOXES  
FOR EVERY KIND OF SERVICE.  
Street Railway Wheels of all Sizes.**

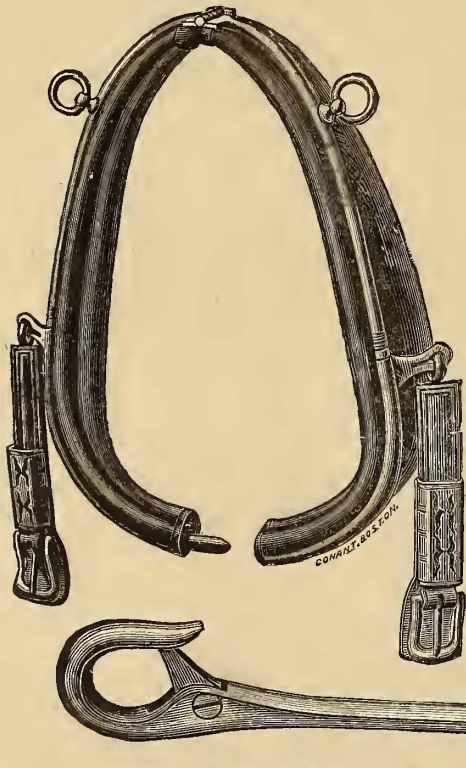
**JOSEPHINE D. SMITH,**

Successor to the late WILLARD H. SMITH,



**Manufacturer of Railroad Centre Lamps and Reflectors  
AND ALL KINDS OF SHIP AND MARINE LAMPS.  
350 & 352 Pearl St., New York.**

**BERRY'S PATENT HAMES.**



**Lightness, Strength,  
Durability, Quick-  
ness and Sim-  
plicity.**

They have the advantage of easy adjustment. No huckles or straps are used. They can be applied in an instant, being fastened to the collar. The collar is divided and there is no strain upon the collar or the eyes of the horses.

In case of accident the whole harness can be removed at once.

They are adapted to the use of Fire Departments, Horse Railroads, Express Wagons, Teams and Light Carriages, and are in use in over one hundred cities and towns in the United States and Canada.

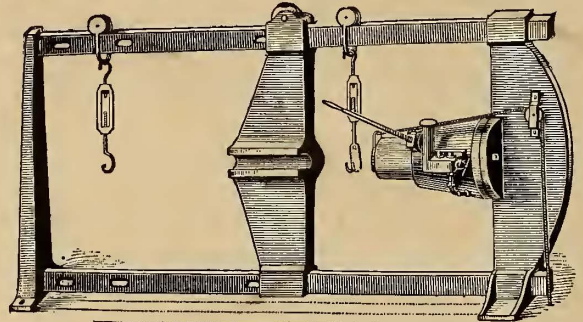
WE ALSO MANUFACTURE THE

**REGAN PATENT SNAP.**

They are made of the best gun metal and malleable iron, with a brass spring which is inclosed in a water-tight socket and made rust and dust proof. It is an impossibility for it to become detached. Write for illustrated catalogue and prices.

**CHARLES E. BERRY, Cambridge, Mass.**

**HAND POWER, LEVER AND HYDRAULIC PRESSES.**



HAND AND POWER CAR-WHEEL PRESSES. (See page 197, July, 1885.)

**Screw and Hydraulic Jacks.  
WATSON & STILLMAN,  
471 S. GRAND ST., N. Y.**

**FRED. J. KALDENBERG,**

SUCCESSOR BY PURCHASE TO THE

**NEW ENGLAND CAR SPRING CO.**

(ESTABLISHED 1851),

MANUFACTURER OF SUPERIOR QUALITY

**VULCANIZED RUBBER CAR SPRINGS,**

AND ALL KINDS OF

**RUBBER HOSE, VALVES, ETC.**

FACTORY AND OFFICE :

**213 to 229 E. Thirty-third St., New York,  
(Bet. 2d and 3d Aves.)**

**TELEPHONE CALL, NASSAU 696.**

Correspondence Solicited.

**DOWNTOWN OFFICE: 125 FULTON ST.**

**P. O. Box 91. Send for Price List.**



(This Trade Mark on all Genuine Covert Goods.)

We call particular attention of all horse railroad companies to our celebrated

- HARNESS SNAPS,**
- SWIVEL SNAPS,**
- OPEN EYE BIT, CHAIN AND TRACE SNAPS,**
- ROPE AND WEB HALTERS,**
- HALTER LEADS,**
- BREAST CHAINS,**
- HALTER CHAINS,**
- TRACE CHAINS,**
- REIN CHAINS AND**
- BREAK CHAINS.**

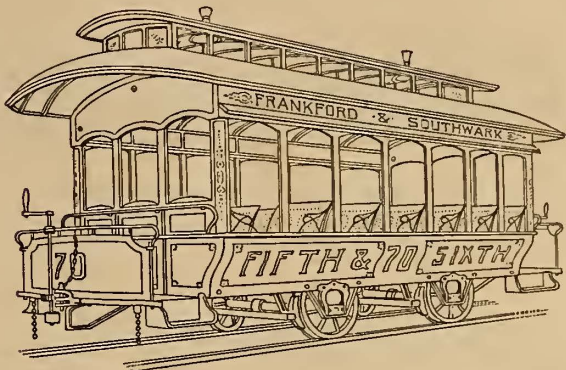
Send for illustrated catalogue and price list.

**COVERT MANUFG. CO.,**

SOLE MANUFACTURERS,

**WEST TROY, N. Y.**

FOR SALE.



Four Summer Cars, good as new, built in very best manner, perforated seats bronze trimmings, etc., centre aisle, seating room for 30. The company having discontinued the use of summer cars offer the same for sale on very reasonable terms. For description and price apply to FRANKFORD & SOUTHWARK R.R. CO., 2501 Kensington Ave., Philadelphia.

1885.

Inter-State Industrial Exposition OF CHICAGO.

Will Open Wednesday Evening, September 2, and Close Saturday Evening, October 17.

Every department will be replete with the newest in SCIENCE, INDUSTRY & ART.

The immense demand for space to date is a guarantee of a magnificent Exhibition. Railroads centering in the city will carry passengers at hard-pan rates.

ADMISSION:

ADULTS . . . . . 25c. | CHILDREN . . . . . 15c.

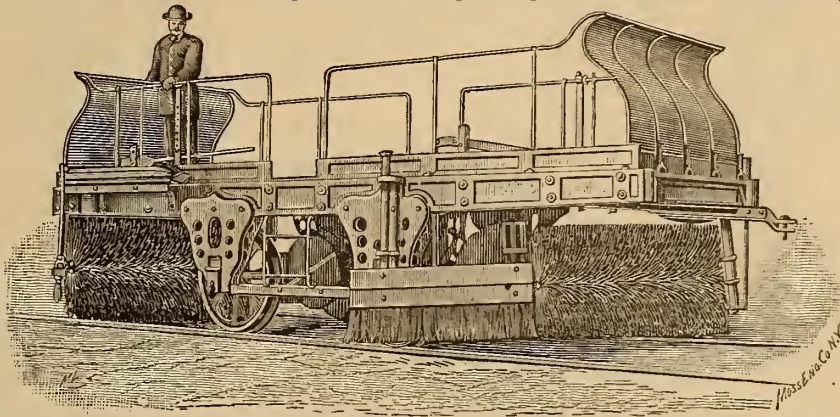
The Brooklyn Railway Supply Company's Snow Sweeper and Plow.

Best Materials only used in construction.

White oak frames.

Many improvements.

The famous cylinder brooms, for heavy snows, under United States Letters Patent, supersede old six wing sectional broom.



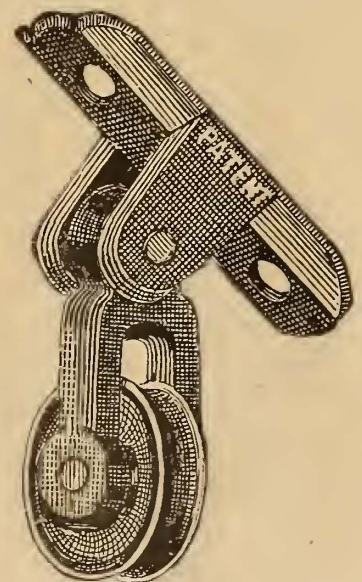
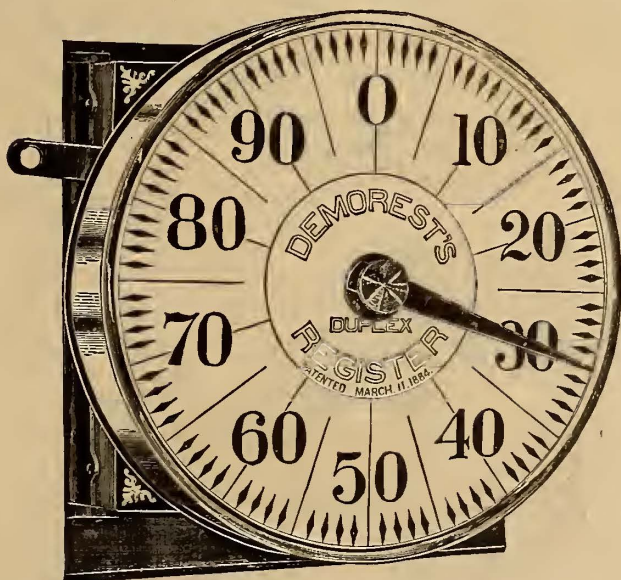
Refer to the larger companies who have used all kinds of snow sweepers, and can therefore speak from actual experience.

WORKS:

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BROOKLYN, N. Y.

DEMOREST'S DUPLEX FARE REGISTERS.



The Half Trip system and the perfect safety in allowing the conductor to reset his register by being required to sign his name, surpass anything of its kind ever before offered to the public.

All companies who use the Duplex Register will be indemnified.

We will place any number of our Duplex Registers (with or without the fare box, according to the kind of car), upon trial for any time desired, at a very slight cost. Our terms of trial are quite reasonable. A trial is solicited.

Address the proprietor,

The fare-box and register combined is the only perfect system of checking the driver in neglect to register fares put in the box, and marking the registrations upon a paper dial serves as an infallible record to be filed away for future reference.

Patent Hinge Rib Pulley is acknowledged the best.

Railroad companies should be careful in ordering this line of goods. As owner of the patents we are the only ones to order from.

W. JENNINGS DEMOREST,

R. M. ROSE, Manager.

15 East 14th Street, New York City.

J. W. FOWLER, President.

THE

DAN'L F. LEWIS, Treasurer

# LEWIS & FOWLER M'F'G CO.

MANUFACTURERS' SOLE AGENTS FOR THE UNITED STATES FOR THE

**OTIS**



**SAFETY**

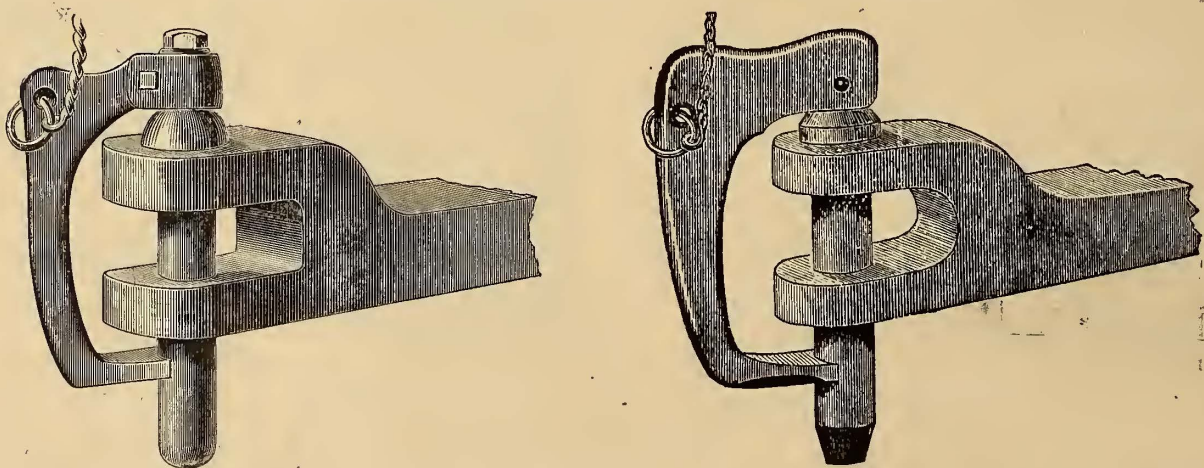
**COUPLING**



**PIN,**

**FOR STREET CAR**

**PURPOSES.**



# THE LEWIS & FOWLER MFG. CO.,

8 COLUMBIA HEIGHTS, BROOKLYN, N. Y.



J. W. FOWLER, President.

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# LEWIS & FOWLER M'F'G CO.

P. O. BOX 102.

BROOKLYN, N. Y.

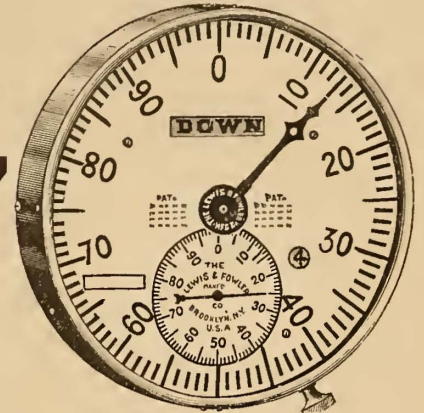
Patentees and Manufacturers of

IMPROVED

## "ALARM"

PASSENGER REGISTER.

HIGHEST PRIZE.



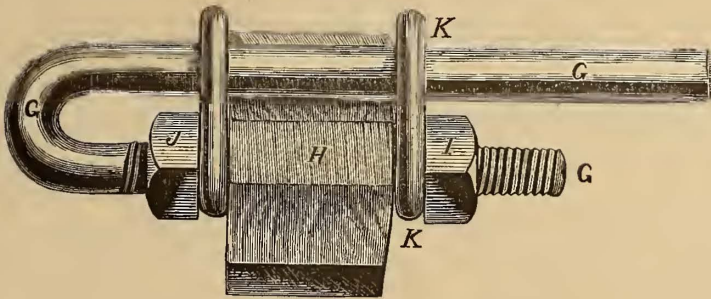
SILVER MEDAL, CHICAGO, 1883.



—SOLE AGENTS AND MANUFACTURERS—

### VAN TASSEL'S Patent Brake Rod

FOR STREET CARS.

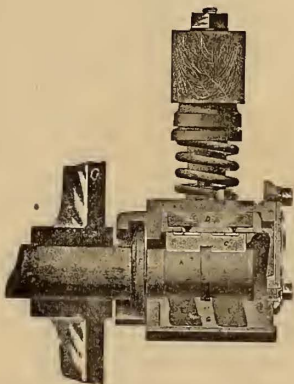


### SMALL'S Automatic Fare Collector.

FOR FARE BOX CARS.

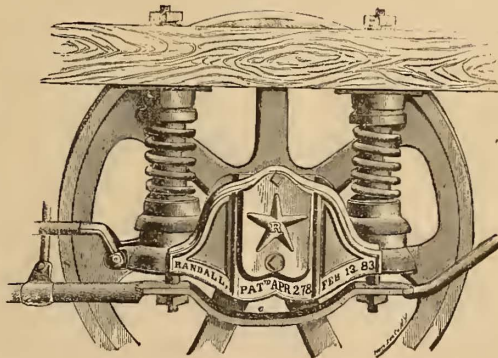


### "RANDALL'S" PATENT CAR AXLE AND BOX.



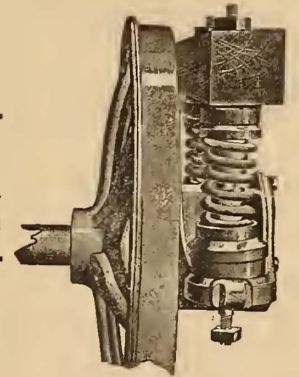
SECTIONAL VIEW.

DUST  
TIGHT.



FRONT VIEW.

ANTI-  
FRICTION



END VIEW.

Agents for ORIENTAL METAL for Street Car Journal Bearings.

# The Goodenough System

OF

# HORSE-SHOEING.

*The Goodenough System of Horse-Shoeing, of which the GOODENOUGH HORSE-SHOE is the exponent, is an endeavor to take from the hand of unthinking and barbarous method, the important art of farriery.*

*In the correct use of the system and proper application of the shoe, the sole bars and frog of the horse's foot are never cut, the rasp and knife being applied only to the wall of the foot, and no fire is used in the fitting.*

*The shoe is very light and narrow (Army pattern), easily worked cold and allowing frog bearing, without which there can be no good horse-shoeing.*

## FROG PRESSURE

*is as important a factor to the health of the horse's foot as air is to the lungs or food to the stomach. It is the*

## KEY-STONE OF THE ARCH.

The advantages of the Goodenough System are, first and foremost, **SOUND HORSES; Secondly, CHEAP HORSE-SHOEING.**

*Horse railroads using the system in its entirety not only buy much less iron and pay for much less labor, but have also much more serviceable stock.*

*Said a horse railroad superintendent of now the largest road in the United States:*

*"We don't wear iron nowadays, we wear frogs and cobble stones; nature provides frogs and Boston finds cobble stones."*

*To those who desire to read further upon the subject we will send upon application free of cost our pamphlets entitled,*

**"HORSE-SHOEING," and "FACTS FOR HORSE-OWNERS."**

# THE GOODENOUGH COMPANY,

156 and 158 East Twenty-Fifth Street,

**NEW YORK.**

# LAKE & McDEVITT'S Patent ROPE TRACE

For Horse Railways, Omnibus Lines, Etc.



### The Advantages OF THE ROPE TRACE

are its ready application to Horse-Car service, or to any other purpose where cheap harness is required. It only costs about half as much as leather traces, while at the same time one set of ROPE TRACES will (when used on horse cars) take the place of three or more sets of leather traces, as the Tugs remain attached to the car all day, no matter how many changes of stock are made. The relief horses having hooks attached to their hames, all that is necessary is to unhook the tugs from the working team back in the fresh horses, hook on the tugs, and the change is made. Railroad men will at once perceive their adaptability and economy from the above facts. They will also last longer than leather traces, and require but very little care. From their durability and cheapness they are also especially adapted for all kinds of farm use and heavy teaming, as farmers, etc., can easily repair them.

Patent No. 171,232, December 21, 1875.

In use on the Chicago West. Div. R'y.; Louisville City R'y Co.; Milwaukee City R'y; Transverse R'y Co., Pittsburg, Pa.; Citizens Street R'y Co., Pittsburg, Pa.; Pittsburg and Birmingham, Pittsburg, Pa.; Central City R'y, Peoria, Ill.; Grand Rapids R'y; Minneapolis St. R'y Co.; St. Paul City R'y; Houston City R'y, Texas; Superior Street R'y, Cleveland, O.; Cincinnati City R'y Co.; Fifth Ward Street R'y, Syracuse; Detroit City R'y.; Ft. Wayne and Elmwood St. R'y, Detroit, Mich.; Galveston City R'y; Springfield City R'y, Springfield, Ill.; Toledo St. R'y, Toledo, O.; Adams St. R'y, Toledo, O.; Atlanta Street R'y, and others, in all on about 100 Street R'ys in United States and Canada, and a large number of other prominent Street R'y Companies throughout the Country. Send for descriptive Circular containing testimonials, prices, etc., to

**LAKE & McDEVITT, 161 South Robey Street, Chicago, Ill.**

## CLARK'S PATENT POWER GROOMING MACHINE, SINGLE OR DOUBLE.



Patented December 15th. 1874.

Patented January 9th. 1883.

### TO STREET RAILWAY COMPANIES AND OTHER STOCK OWNERS.

This machine for grooming may be driven by any known power, and can readily be placed for use in any stable or out-building. It can be operated by an ordinary groomer; its work is perfect; its action simple and effective. Stock owners will readily realize the importance of the machine. The perfection and rapidity of its work, and the benefits derived by its use, commend it to those interested in the care and use of all classes of thoroughbred and work stock. The most vicious animal readily submits to its use. Machine Grooming is found to be less expensive than hand grooming, saving in food and medicines, and materially increasing the value of the animal.

### The Curry Comb and Hand Process Superseded! Economy of Labor! Perfection of Work!

Three Hundred Head of Stock Thoroughly Groomed with Each Machine every Ten Hours.

This Grooming Machine is in daily use in some of the largest Street Railway Companies' stables, and has always given perfect satisfaction. Among those using it are the City R'y Co., Chicago, Ill.; Detroit City R'y Co., Detroit, Mich.; Central City R'y, Peoria, Ill.; M. W. Dunham, Wayne, Ill.; West Division Street R'y Co., Chicago, Ill.; Lindell Street R'y Co., St. Louis, Mo.; Pleasant Valley R'y Co., Allegheny City, Pa.; Marshall, Field & Co., Chicago, Ill.; Leroy Payn, Chicago, Ill.; Saginaw City R'y, Saginaw, Mich.; Pittsburg and Birmingham R'y Co., Pittsburg, Pa.; and a number of others who have given testimonials as to the perfect work; ing of the machine. For prices, circular and other information apply to

**161 SOUTH ROBEY STREET, CHICAGO, ILL.**

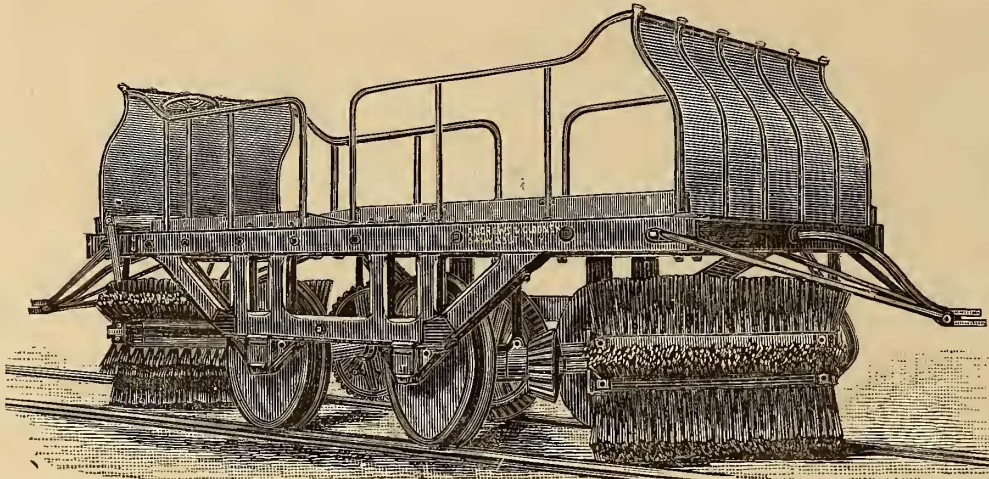
# ANDREWS & CLOONEY,

F. H. ANDREWS.

F. T. LERNED, Gen. Agent.

B. A. CLOONEY.

## Snow Sweepers, Ploughs & Sand Cars.



## THE STREET RAILROAD SNOW SWEEPER

KNOWN AS THE

“White” or “New York” Sweeper.

MADE EITHER WITH SECTIONAL BROOMS, AS SHOWN IN THE ABOVE CUT, OR WITH CYLINDRICAL BROOMS.

Sectional brooms are provided unless otherwise ordered, owing to their superiority in heavy snows. In localities having only light snows a cylindrical broom answers the purpose. No patents on either kind, all having expired. No difference in price.

We make two sizes: Full Size for 8 and 10 Horses; 3-4 Size for 6 and 8 Horses.

Over One Hundred are in use in New York, Brooklyn and Philadelphia,

And we are now building (August, 1885) sweepers for Chicago, St. Louis, Boston, Salem, Mass., and six additional ones for roads in New York City. References can be made to any or all of the roads in New York City or Brooklyn; Philadelphia City Pass. Ry. Co. (Chestnut & Walnut St.), Second and Third St. Pass. Ry. Co., Union Pass. Ry. Co.; Phila. Traction Co., all of Philadelphia; Citizens' Ry. Co., Pittsburgh; Pittsburgh & Birmingham R. R. Co.; Pittsburgh, Allegheny & Manchester R. R. Co., Pittsburgh; Rochester & Brighton R. R. Co., Rochester, N. Y.

**Sweepers made with Brooms propelled by Steam if required.**

NOTE.—No Patent on Broom Heads or manner of arranging the same.

Works: 535 to 551 West Thirty-third Street,  
and 538 to 552 West Thirty-fourth Street.

Office: 545 West Thirty-third Street,  
NEW YORK CITY.

F. H. ANDREWS.

F. T. LERNED, GEN'L AGT.

B. A. CLOONEY.

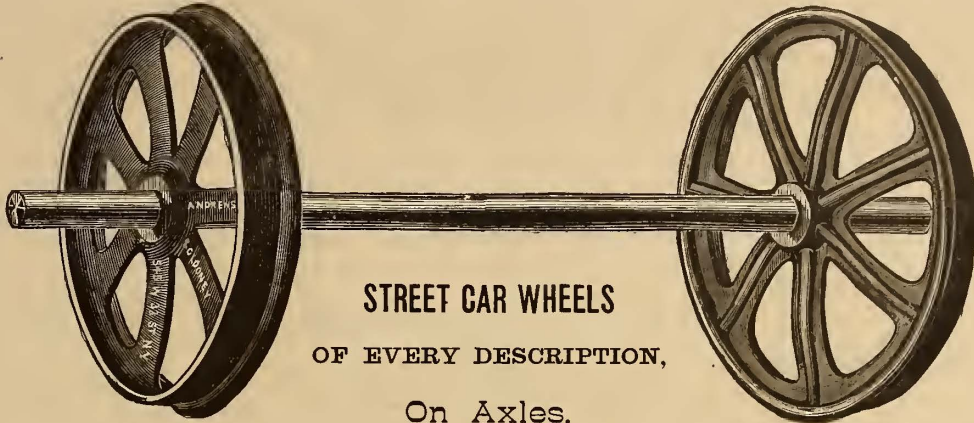
# ANDREWS & CLOONEY,

OFFICE :

545

W. 33d St.,

NEW YORK.



STREET CAR WHEELS  
OF EVERY DESCRIPTION,  
On Axles.

WORKS :

535 to 551

West 33d St.,

AND

538 to 552

West 34th St.,

NEW YORK.

Manufacturers of

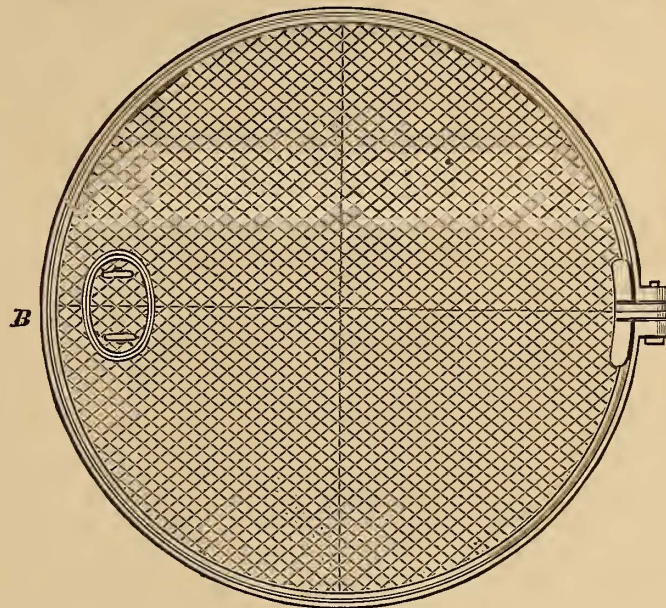
Elliptic, Spiral,

Volute, Car and

Engine

## SPRINGS

Of Every Description.



Street Railway Turn-table.

Car Wheels,  
Axles,  
Brake Shoes,  
Pedestals,  
Boxes,  
Brass Bearings  
AND  
Castings

of all Descriptions where great  
Strength is Required.

Also,

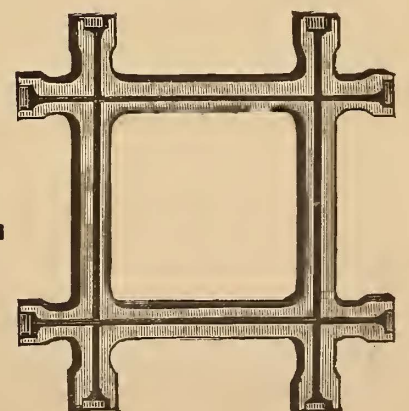
SWEEPERS, SNOW PLOWS,  
**TURN-TABLES,**

Track Work, Automatic Switches, Etc.

STEEL GROOVE RAILS AND MACHINERY



Street Car Springs.



Street Railway Crossings.

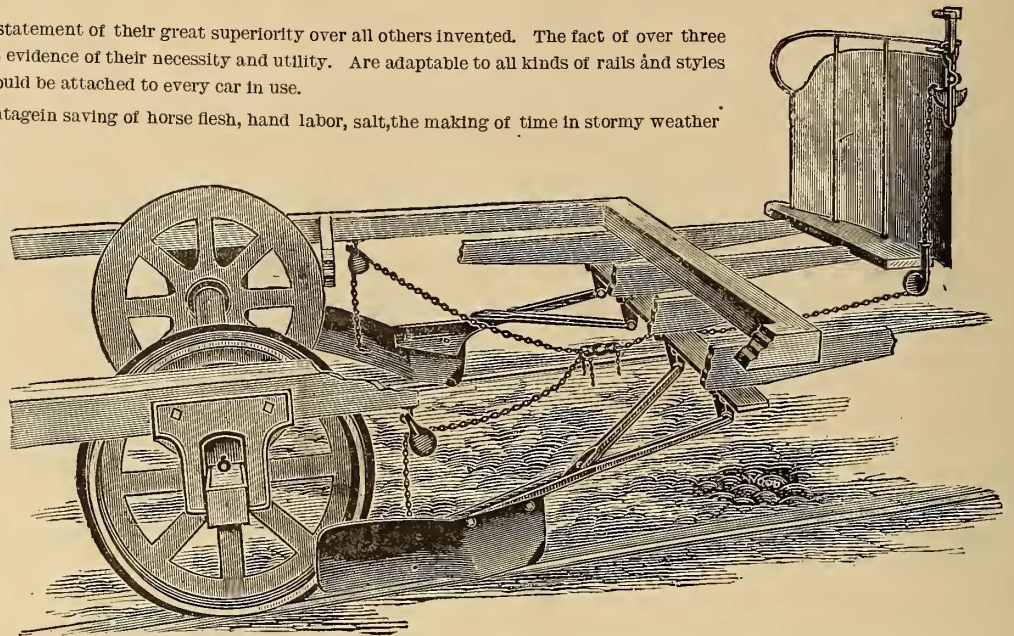
SEND FOR ILLUSTRATED CATALOGUE.

# DAY'S IMPROVED STREET RAILWAY TRACK CLEANERS.

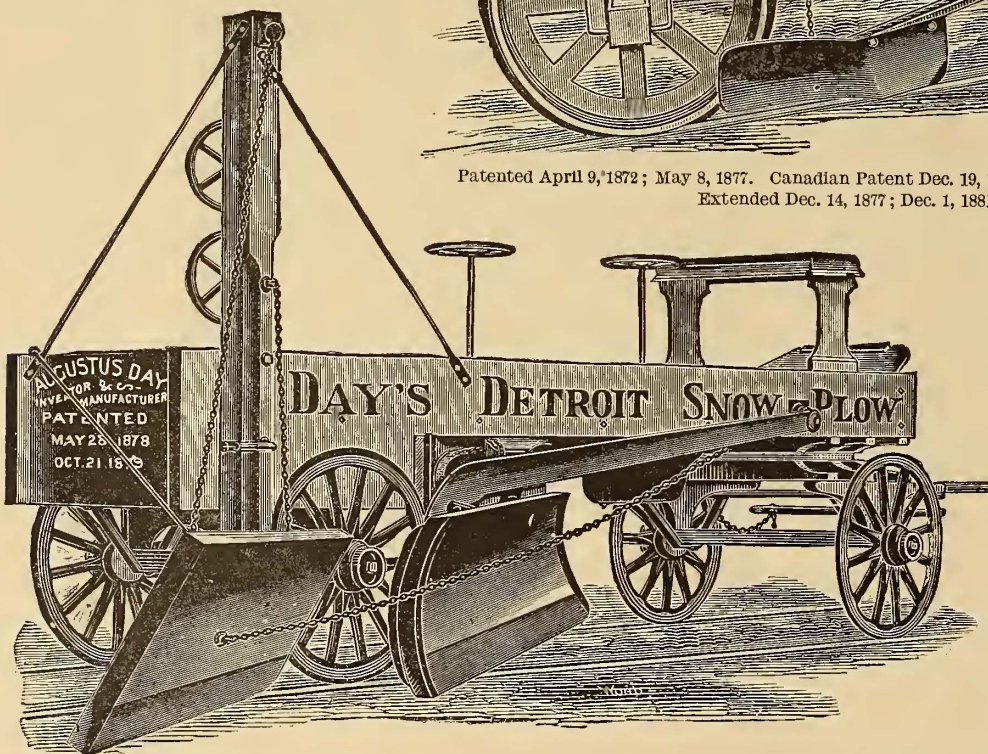
These Track Cleaners need no extended statement of their great superiority over all others invented. The fact of over three thousand pairs being now in use is sufficient evidence of their necessity and utility. Are adaptable to all kinds of rails and styles of cars. To secure the largest benefit they should be attached to every car in use.

No estimate can be made of their advantage in saving of horse flesh, hand labor, salt, the making of time in stormy weather. Since their introduction new and valuable improvements have been made in their construction, mode of attachment, and convenience of handling. They are finished in a thorough, workmanlike manner of the best material obtainable, the design being to manufacture the best and most efficient article in preference to other considerations. Method of sale and price considerably changed.

Reference is made to a few of the many roads using these Cleaners, with respective numbers of each, viz.:



Patented April 9, 1872; May 8, 1877. Canadian Patent Dec. 19, 1872; Dec. 18, 1876. Reissued Aug. 27, 1878. Extended Dec. 14, 1877; Dec. 1, 1881; Dec. 12, 1882.



Fort Wayne & Elmwood Ry., Detroit, Mich.....	30 pair.
Detroit City Ry., Detroit, Mich.....	135 "
Chicago City Ry., Chicago, Ill.....	350 "
Rochester City & Brighton R. R., Rochester, N. Y. . . .	75 "
Albany Ry., Albany, N. Y. . . .	40 "
Waterville Turnpike & R. Co., Albany, N. Y. . . .	24 "
Elmira & Horseheads R. R., Elmira, N. Y. . . . .	11 "
Lynn & Boston R. R., Boston, Mass. . . . .	68 "
Boston Highland Ry., Boston, Mass. . . . .	46 "
Lowell Horse Ry., Lowell, Mass. . . . .	27 "
Grand Rapids Street Ry. . . .	50 "
Naumkeag Street Ry., Salem, Mass. . . . .	40 "
Merrimack Valley Ry., Lawrence, Mass. . . . .	21 "
Louisville City Ry., Louisville, Ky. . . . .	55 "
Cream City Ry., Milwaukee, Wis. . . . .	37 "
Milwaukee City Ry., Milwaukee, Wis. . . . .	40 "
Buffalo Street Ry. . . . .	40 "
And many others.	

Taunton Street Ry., Taunton, Mass. . . . .	10 pair.
New Haven & West Haven Ry., New Haven, Conn. . . . .	16 "
Bridgeport Horse Ry., Bridgeport, Conn. . . . .	32 "
Adams Street Ry., Toledo, Ohio. . . . .	14 "
Toledo Street Ry., Toledo, Ohio. . . . .	13 "

For Illustrated Circular and New Price List, address

**AUGUSTUS DAY,**  
**76 State Street. Detroit, Mich., U.S.A.**

# RICHARD VOSE,

13 Barclay Street, . New York,

PATENTEE AND MANUFACTURER OF

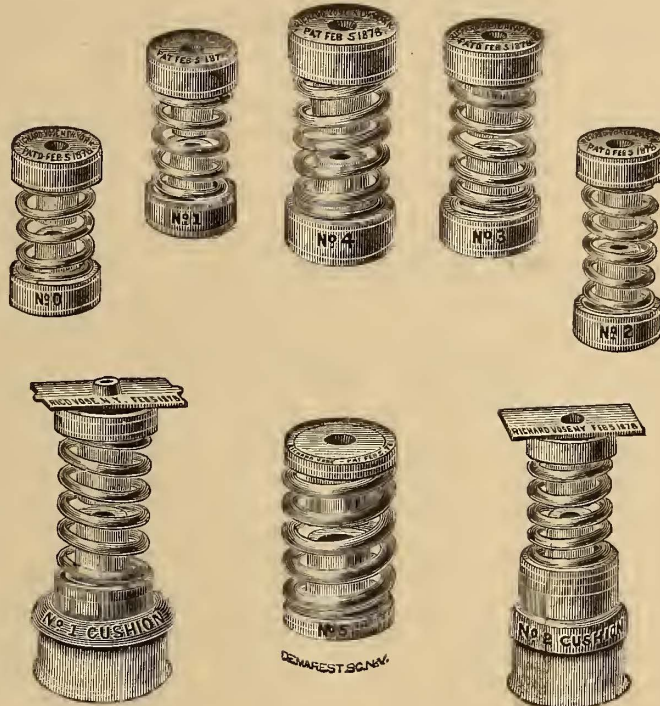
## Graduated Street Car Springs.

### RUBBER CONE.

Patented, April 15th, 1879.

ADAPTED TO THE

STEPHENSON,  
BEMIS,  
RANDALL,  
HIGLEY,  
BRILL,  
JONES,  
BALTIMORE,  
—AND—  
ALL OTHER BOXES.



No. 0, for 10-ft. Light Cars.

No. 1, for 10-ft. Cars.

No. 2, for 12-ft. Cars.

No. 3, for 14-ft. Cars.

No. 4, for 16-ft. Cars.

No. 5, for 16-ft. Cars.  
(Single Pedestal.)

No. 1, Cushion, for 16-ft. Cars.

No. 2, Cushion, for 12 and 14-ft. Cars.

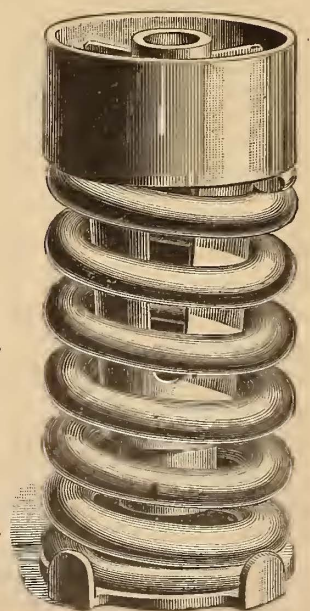
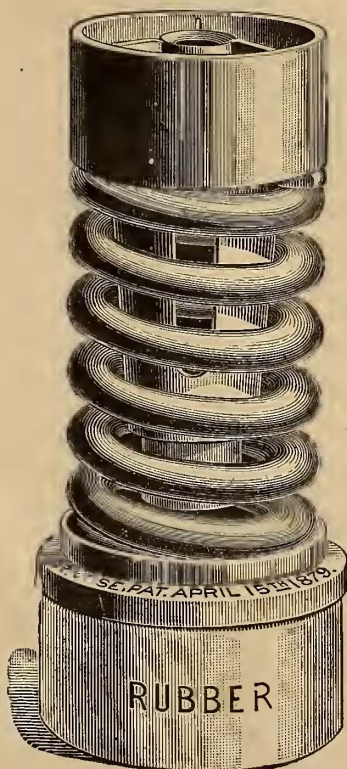
### STEEL CONE CITY CAR SPRING.

Patented April 15, 1879—August 5, 1884.

The unprecedented popularity of the

**"VOSE GRADUATED RUBBER CONE SPRING"**

for HORSE CARS has induced the inventor to bring this class of Springs as near perfection as possible, and after a series of experiments and tests now presents for favor what he claims to be the *MOST PERFECT SPRING FOR HORSE CARS* ever offered. It is exceptionally *SOFT AND EASY* with the *EMPTY CAR* or with the *GREATEST LOAD*. It is believed to be the *MOST DURABLE*, being constructed upon a principle that seems to insure that the Spring must *ACTUALLY WEAR OUT*. The very *Finest Quality of Crucible Cast Steel* will always be used in these Springs.



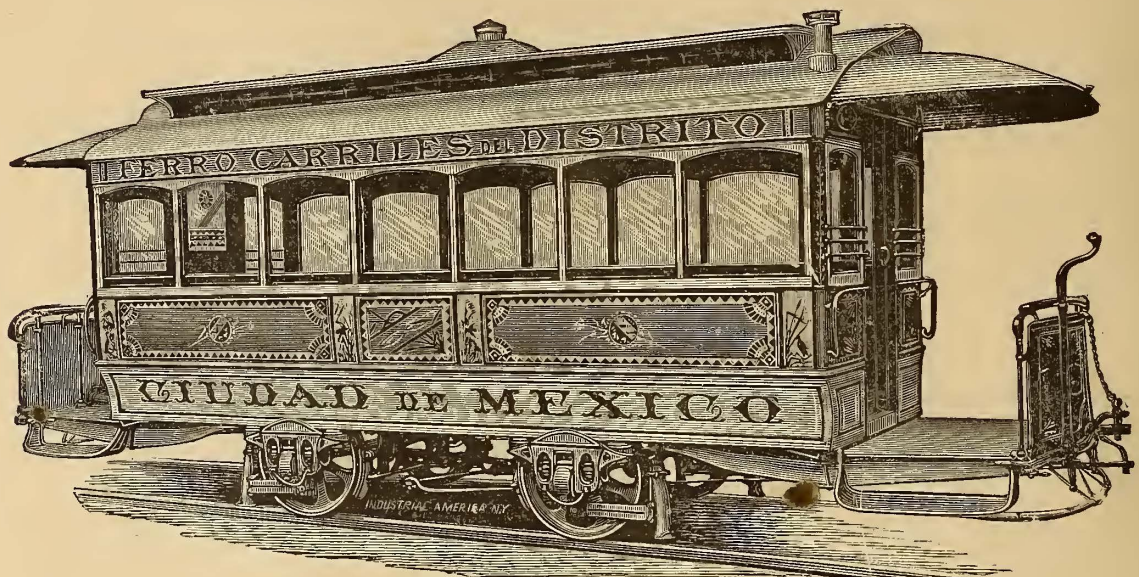
# JOHN STEPHENSON COMPANY

(LIMITED),

**New York.**

## TRAMWAY CARS

MEDAL OF FIRST CLASS, WORLD'S INDUSTRIAL COTTON EXPOSITION, NEW ORLEANS, 1885.



**LIGHT ELEGANT, DURABLE.**

*Every Description.*

*Best Materials.*

*Minimum Prices.*

ORDERS QUICKLY FILLED. CAREFUL ATTENTION TO SHIPMENTS.

**All Climates Suited.**