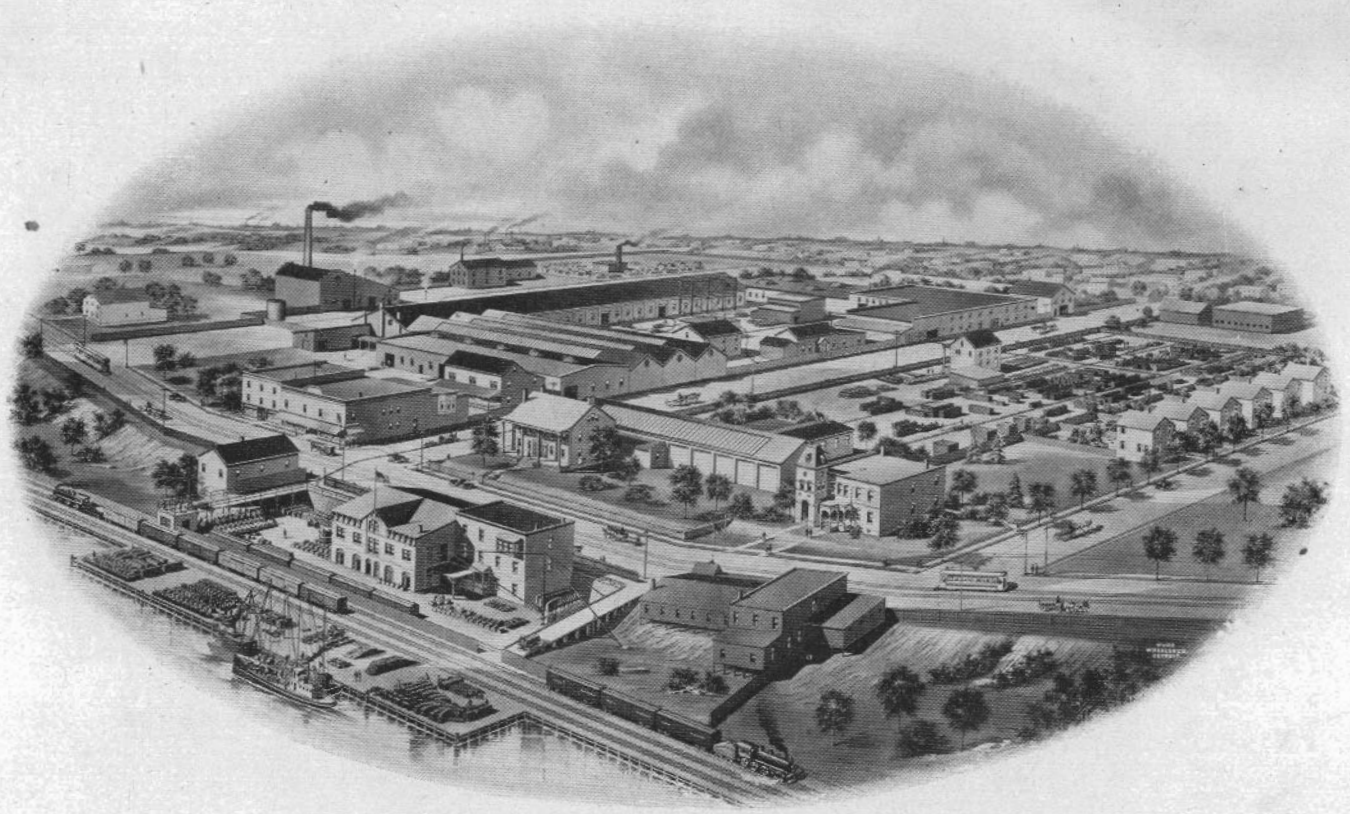


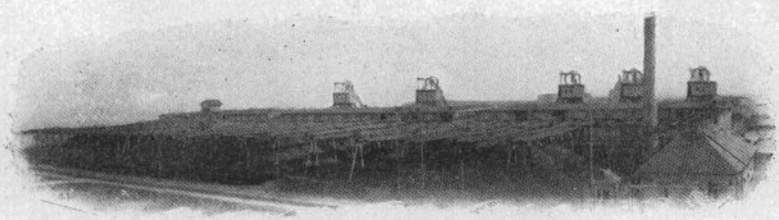
No. 0479.

WORKS OF THE C. W. HUNT COMPANY, WEST NEW BRIGHTON, STATEN ISLAND, N. Y.

Our shipping facilities are exceptionally good. The property fronts on New York harbor with 20 feet of water at our wharf. All railways centring in New York send their lighters to our wharf to deliver and receive shipments, and the Baltimore & Ohio Railroad passes through our property with side tracks for our use.

CATALOGUE NO. 0510.

"HUNT" AUTOMATIC RAILWAY.



No. 041.

C. W. HUNT COMPANY,

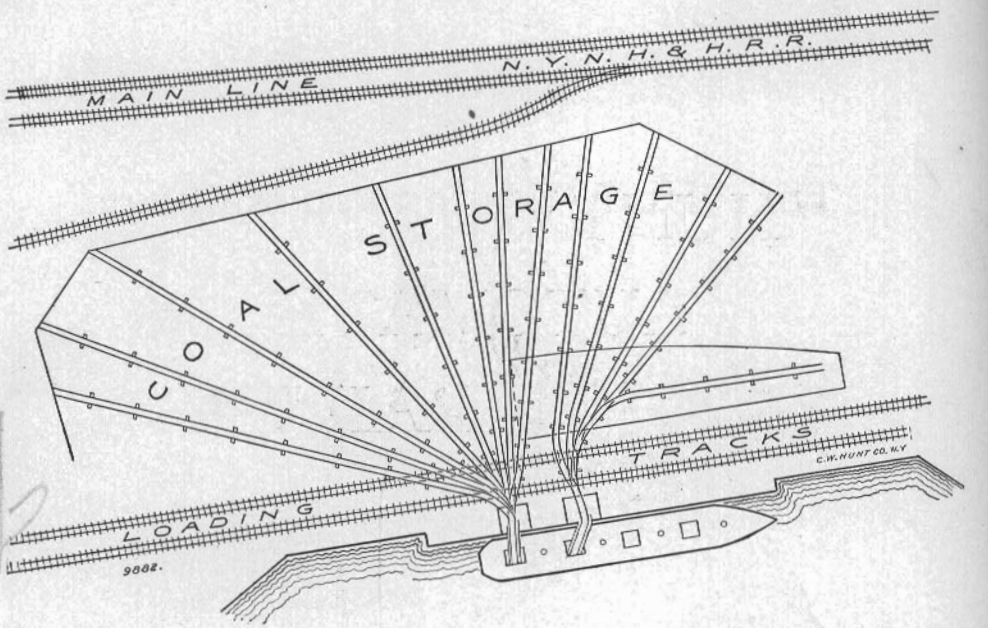
(Established 1872.)

HEAD OFFICE AND WORKS, WEST NEW BRIGHTON, N. Y.

NEW YORK CITY OFFICE, 45 BROADWAY.

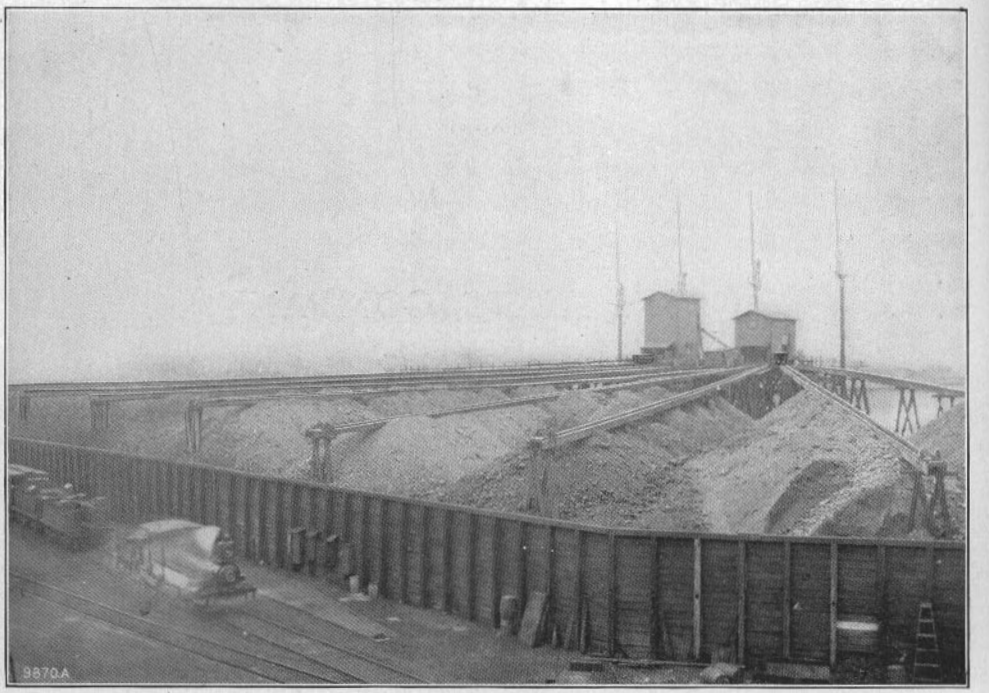
CABLE ADDRESS: "SANDSHOVEL, NEWYORK."

CODES: "A 1,"
"A B C," Fourth and Fifth Editions.
"LIEBERS,"
"WESTERN UNION."



No. 9882.

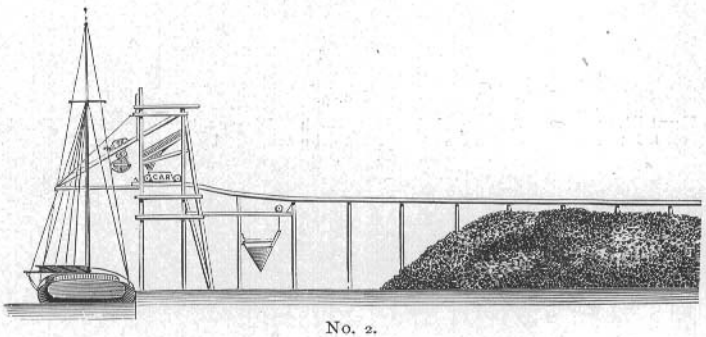
Plan of thirteen Automatic Railways, from two hoisting towers, New York, New Haven & Hartford R. R. Co. Locomotive Coaling Station at New Haven, Conn. See also engraving No. 9870 A, below.



No. 9870 A.

New York, New Haven & Hartford R. R. Co. Locomotive Coal Storage Yard at New Haven, Conn. View of thirteen Hunt Automatic Railways from the rear of the yard. A plan of these tracks is shown in cut above.

The "Hunt" Automatic Railway.



No. 2.

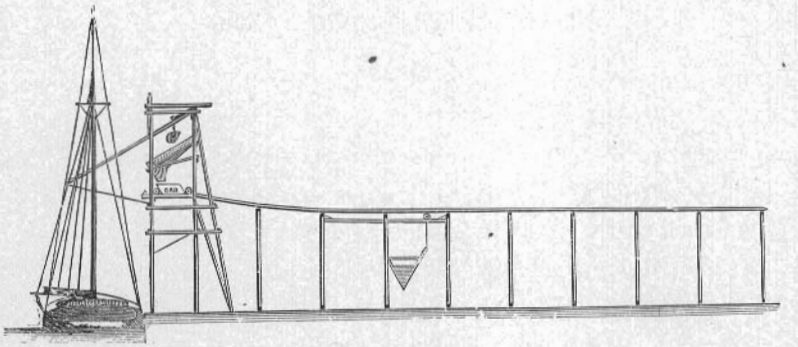
"The Automatic Railway" is now in general use for running the coal back from the front of wharf to the storage bin or pocket. It is an elevated self-acting railway operated entirely by gravity; there is no steam, horse or manual power required in its working. The chief peculiarity consists in storing sufficient energy, which has been acquired by the loaded car descending an inclined track, and which, after the load has been discharged, is utilized to return the empty car back to the place from whence it started. It is limited to a run of about 600 feet.

ONE MAN ONLY.

The coal is hoisted from the boat, either by horse, steam or electric power, and dumped into the car by an attendant. ONE MAN ONLY IS NEEDED TO OPERATE THE RAILWAY, WHO LOADS THE CAR AND STARTS IT. THE CAR RUNS DOWN THE TRACK, DUMPS ITS LOAD AT ANY DESIRED POINT, AND RETURNS TO THE HAND OF THE WORKMAN. THE WORKMAN DOES NOT ACCOMPANY THE CAR.

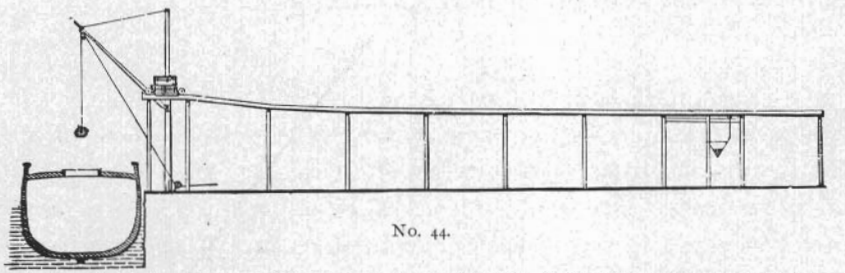
SPEED.

It runs with great rapidity, making a trip of three hundred feet, dumping its load and returning, in about fifty seconds. The car is so entirely automatic in its operation that it requires no attention whatever from the time of starting with its load until its return to the workman, empty and ready for another load.



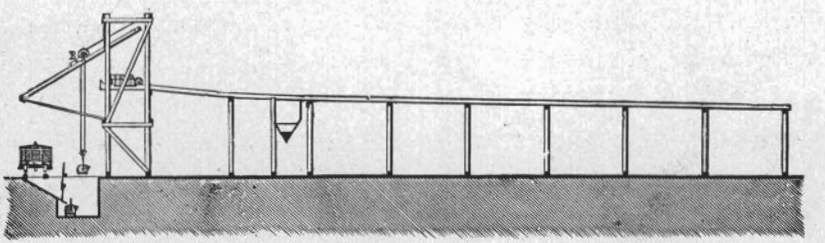
No. 3.

Side view of a Hunt Elevator and Automatic Railway for handling coal. The coal is hoisted from the vessel on a Hunt Elevator and carried back to the storage by the Automatic Railway.



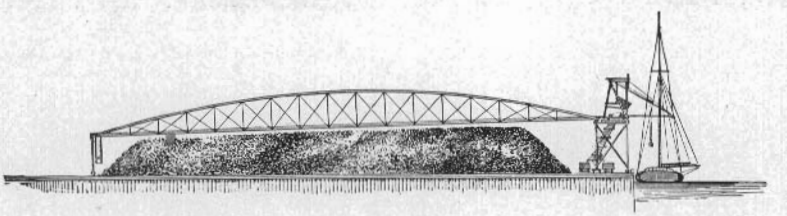
No. 44.

Automatic Railway for handling coal, arranged for use with the ordinary mast and gaff.



No. 29.

Elevator and Automatic Railway, arranged to take coal from dump cars. The pit can be on the outside of the railroad track, and the bucket hoisted and carried over the top of the coal car.



No. 129.

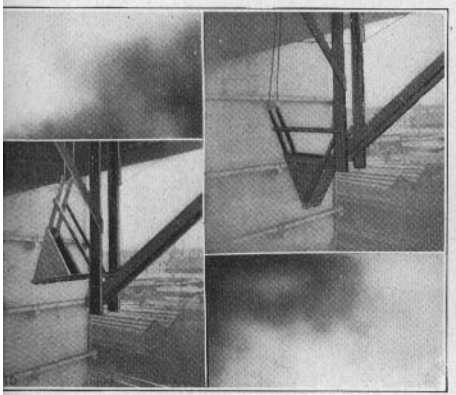
For storing coal when great areas are to be covered, a movable bridge is used to carry the Automatic Tracks. The whole plant—Bridge, Automatic Railway and the Hoisting Tower—moves together.

THEORY OF OPERATION.

When a loaded car reaches the end of its journey it has raised a counterbalance weight to a certain height, by means of a steel wire cable which the car picks up while running down the track. After the load has been automatically dumped, the impulse received by the car from the fall of this counterbalance weight is sufficient to return the empty car back up the grade to its starting point. The weight rises only a limited distance, its object being to give the car a start back, and the momentum of the car carries it the remaining distance. Care has been taken to make the raising of the weight a gradual movement, so that as few sudden strains as possible are brought on the various parts of the mechanism. Special attention has been given to the proportions of the different parts to get this machine perfectly automatic in its working, and at the same time be thoroughly durable and free from destructive wear or delays.

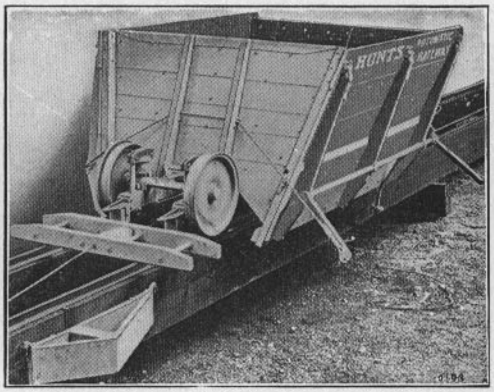
ADAPTABILITY.

This railway can be easily erected in any yard, as there are no confusion of ropes, switches, turnouts, loose pieces to get lost or stolen, and there is nothing to take care of or put away. The car is left just as it was used, and is ready for work at any time. The returning weight can be placed at any part of the track desired, and may be entirely boxed in and coal piled around it ; it needs no attention whatever.



No. 05110.

illustration shows the position of the triangle hen the car is discharging coal and when at rest.



No. 0193.

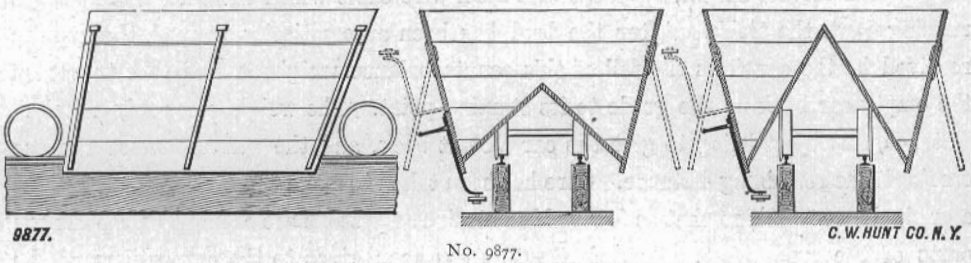
Automatic Railway Car, with Truck, Dumping Blocks, Cross-bar, etc.

STYLE OF CARS.

(See page 9.)

The regular cars used on this track discharge the load by opening the sides by means of a tripping block placed on the track, letting the coal run out on each side. The bottom has a ridge in the centre (see cut No. 9877), so that the material runs

entirely out; the sides are fastened, not to the car, but to each other, so that if one is unfastened, both are. The load is always discharged evenly and without danger of overturning the car, although it is a very narrow gauge.



No. 9877.
Automatic Cars. The bottom angle is made to suit the material to be handled.

PRACTICAL CONSTRUCTION.

The car is built of wood and lined in the best manner with sheet steel, with self-adjusting bearings, rubber springs and steel axles. The bearings are somewhat peculiar, as they are so arranged that the car runs around a curve of thirty feet radius, theoretically as easily as on a straight line and practically nearly as easily. To suit customer's requirements, these cars can be built of steel.

CURVED TRACKS.

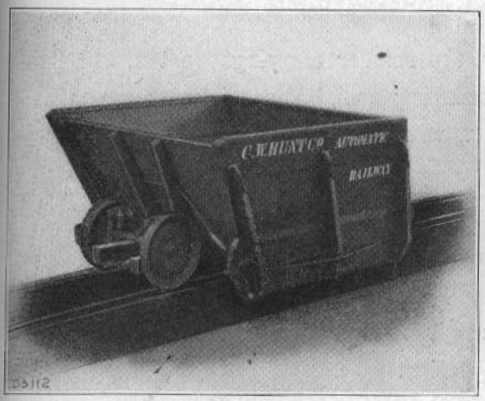
The gauge of the track is narrow, twenty-one inches from outside to outside of rail heads. The steel wire rope that raises the weight is detached from the car except during the time that the car is raising the weight and receiving the impulse to return; this permits the loading end of the track to be curved to a radius of thirty feet. The engravings (pages 4 and 24) illustrating the arrangement of tracks in various yards will show that this system can be adapted to almost any situation when the curves can be confined exclusively to the loading end of the track.

WORKING EXPENSE.

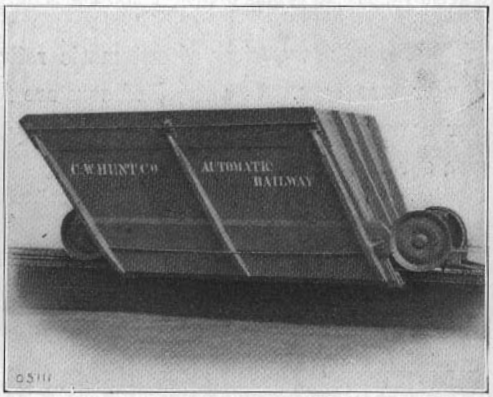
The expense of storing coal with the Automatic Railway is reduced to the wages of one man. The expense per day is the same, whether a small or large amount is handled.

SCALES.

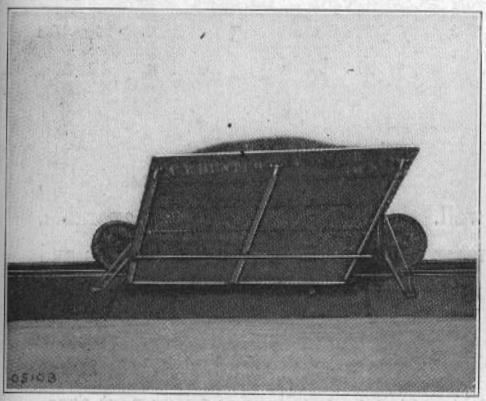
All material received over the railway can be accurately weighed without delay or extra expense by placing platform scales in the track at the loading end; the workman who loads the car also weighs the load, and, while the car is running down the track, enters the weight in the tally-book. On account of the width of the car and the distance the side doors open out, the scale beam must be farther away from the centre of the platform than ordinary scales. We make special scales for the automatic cars.
(See page 11.)



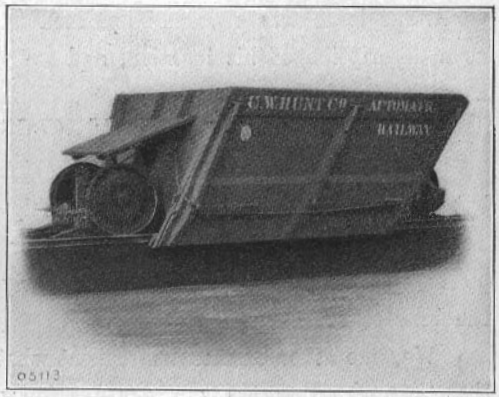
No. 05112.
Automatic Ore Car, Pueblo Smelting Company.



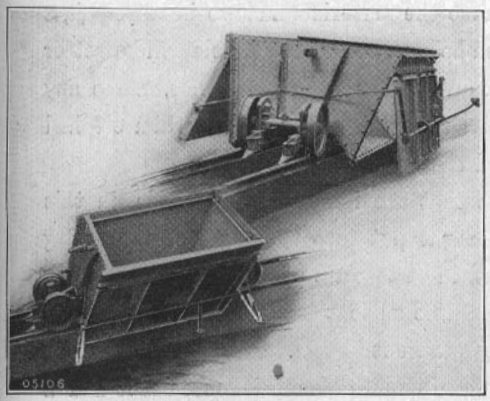
No. 05111.
Special Automatic Coal Car for Akron Gas Company.



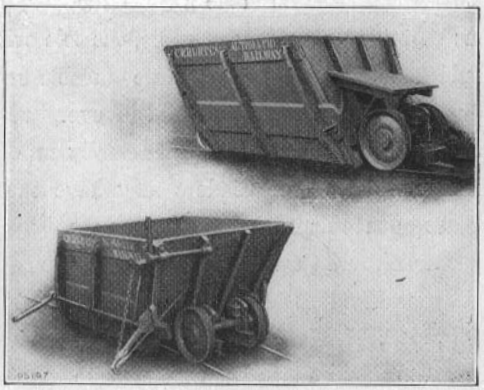
No. 05108.
Automatic Car, J. T. Story, Brooklyn, N. Y., showing the car loaded with coal and ready to dump.



No. 05113.
Special Automatic Ore Car, J. Pohlig, Germany.



No. 05106.
One-ton steel Automatic Coke Car, with doors open and closed, for the Columbus (Ohio) Railway Co. Mt. Vernon Bridge Co., Contractors.



No. 05107.
Front and rear views of special Automatic Ore Car, Buffalo Smelting Works, Black Rock, Buffalo, N.Y.

SIZES.

We make two sizes of automatic railway, the smaller carrying one ton, and the larger two tons. Our standard cars are for handling coal, but special cars are made for carrying ore, stone, phosphates, clay, etc., with the bottom made steeper than are our standard cars for coal.

ILLUSTRATIONS.

The engravings of wharves fitted with the Hunt Machinery, on the following pages, show the extensive use of this railway and the great variety of situations to which it is adapted. It is at work in so many places that it is but little trouble for those who are interested, to go and see it in practical operation.

ESTIMATE OF COST.

As this is a special machine to be built of such height and length as will suit each particular location, we would be pleased to have any party thinking of using it send us a description of his location, and we will then, without charge, send a plan and an estimate of the cost.

BUSINESS ETHICS.

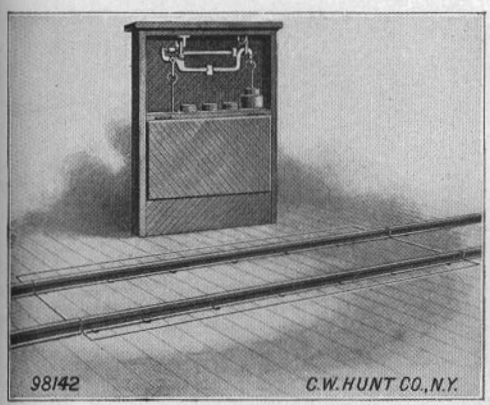
The efficiency of this class of machinery depends not only upon the best design, but upon the perfection of the workmanship as well. The laws of nature are inexorable, and no amount of enthusiasm in the maker, rhetoric in description, or fancy paint and polish, will make poorly designed and poorly built machinery satisfactory when put to the test of regular work.

We, like other business men, elect what class of customers to deal with. We seek that class of purchasers who wish machinery built thoroughly well, with every part carefully made from the best materials, and who are willing to pay whatever amount may be necessary to obtain such. For this reason we give no anxious thought as to whether this or that can be made a little cheaper, but have the materials and workmanship just as thoroughly good as possible, the sole criterion being whether the article will be better adapted for its work or more durable in use. We do not, and will not, make any machinery that is not as good in every respect as though the purchaser himself had selected the materials, and personally supervised the construction.

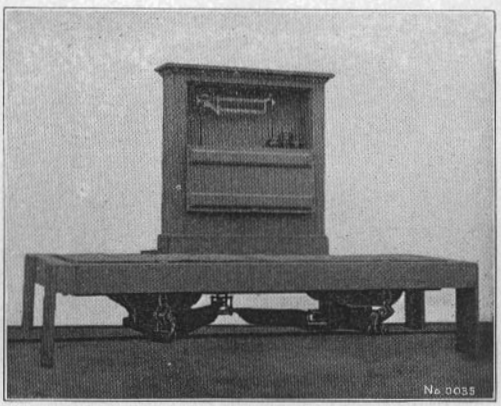
Possibly some readers may have the idea that the improvements made in this class of machinery have first been a happy thought put into the form of a drawing or model, and that the inventor has then sought, in some class of business, a customer who would adopt the device and put it into use. The various kinds of machinery built by the C. W. Hunt Company have had a widely different origin. Every improvement has been devised to meet a definite want of a customer, and not invented first and a place to use it found afterward. This wholly eliminates experimental machinery; a real want is met, instead of an inventor's idea of what somebody ought to want.

Automatic Railway Scales.

Automatic Railway Car Scales are used with the track in the centre of the scale platform, and the beam-box placed at such a distance that the weighmaster has room to stand between the car and the beam-box. On account of the width of the automatic cars, and the distance the side doors open, it is necessary to place the scale beam sixty-six inches away from the centre of the platform. The workman weighs the empty car on the upper beam, then loads the car and weighs the coal on the lower beam. The weight of the coal is entered in the tally book, while the car is running down the track. The scale beam is graduated to pounds, or to kilograms when so ordered.



No. 98142.
Automatic Railway Scale.



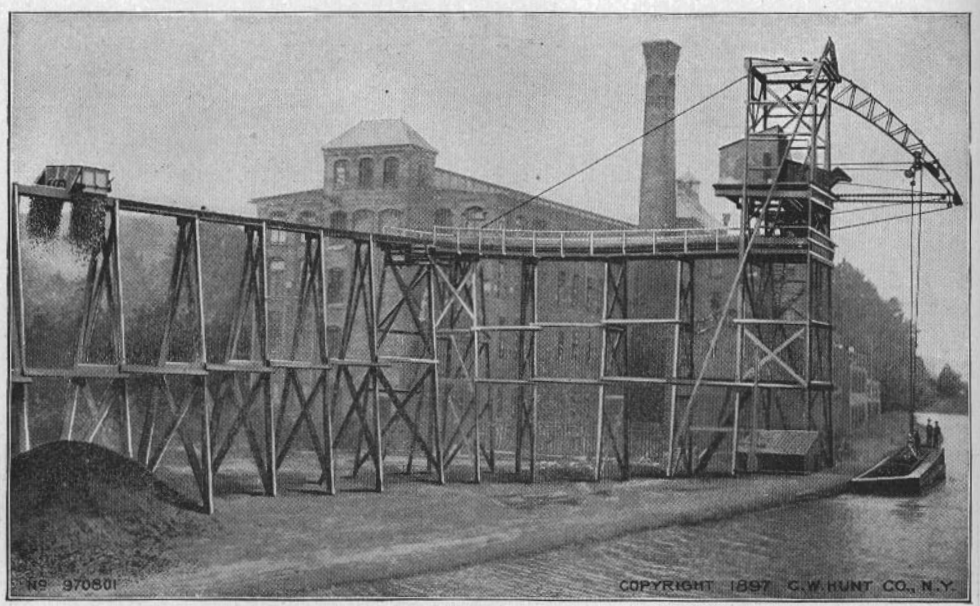
No. 0035.
Automatic Railway Scales, with the platform blocked up to show the mechanism.

We supply all the working parts and ironwork, with which are shipped instructions to the purchaser for framing platform, building the beam-box, and setting up the scales. We do not furnish any of the woodwork.

TABLE OF AUTOMATIC RAILWAY SCALES.

With Double Beams.

	One-Ton Cars	Two-Ton Cars
Capacity of scales, tons,	2	3
Length of platform, feet,	8	8
Width of platform, inches,	54	54
Centre of platform to beam, inches,	66	66
Price F. O. B. New York, without beam-box,		



No. 970801.

Lehigh Coal and Navigation Company, Bethlehem, Pa. Automatic Railway with Curved Track. Car in the act of dumping its load.

No. 970606.

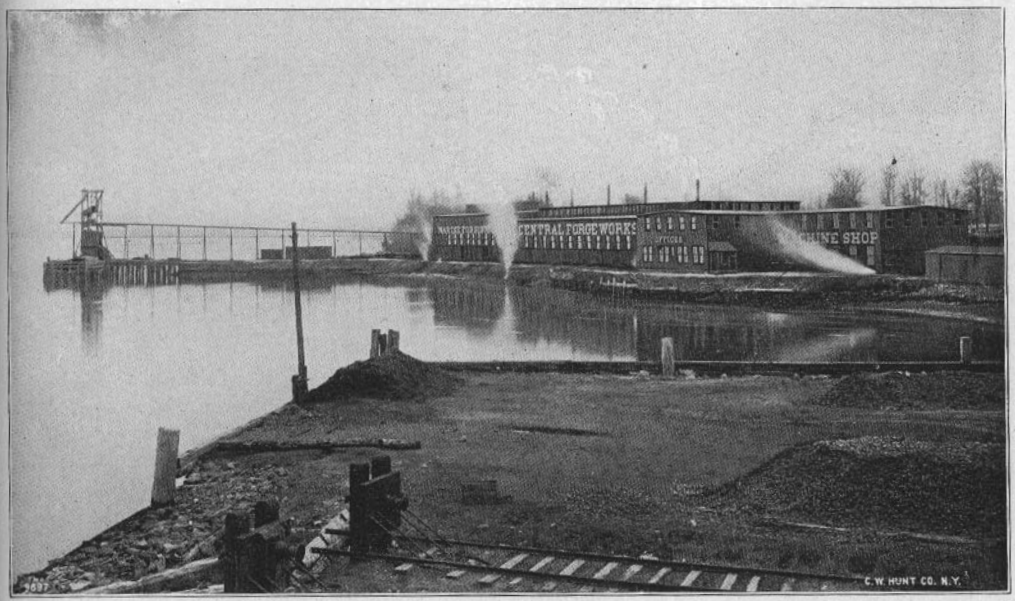
J. T. Story, Coal Yard, Brooklyn, N. Y. The pocket holds 7,000 tons of coal. The coal is hoisted with a two-ton Hunt Steam Shovel, and distributed in the building by two automatic cars on independent tracks.

No. 9873.
Hunt Elevator and Automatic Railway erected for the Rheinisch-Westfaelisches Kohlen-Syndicat, at Ludwigshafen, Germany.
The Automatic Railway is carried on a bridge, 100 meters (328 feet) span. Movable for about 1,000 feet on the wharf.

No. 9874.
Verein Chemische Fabriken, Mannheim on Rhein.

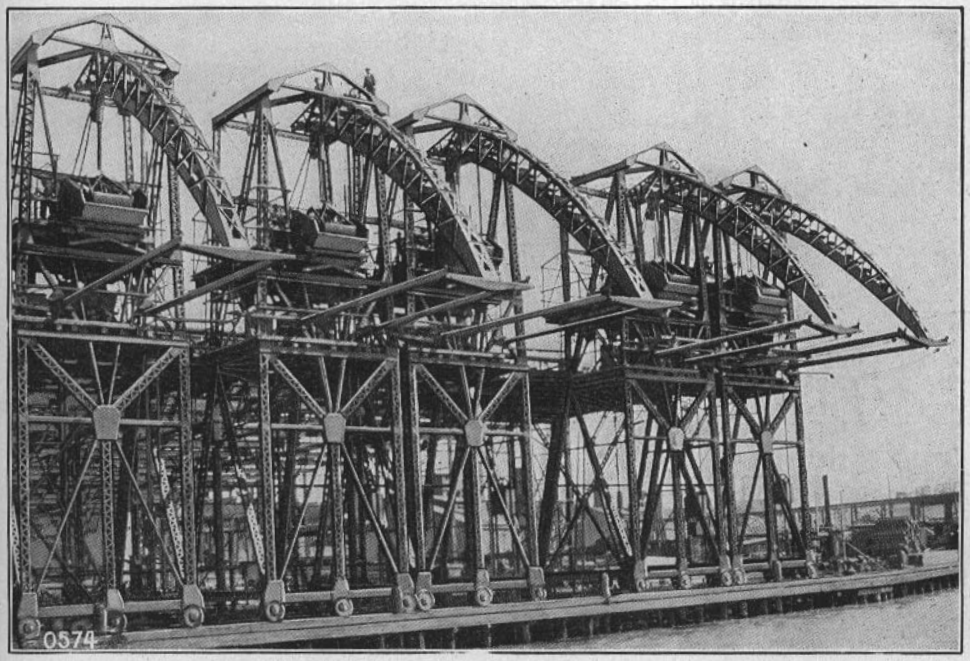
No. 9875.
Double Track Automatic Railway with Curved Tracks, Steel Construction.

No. 94036.
Automatic Railways, Eastern Station of the City Gas Works, Copenhagen, Denmark.



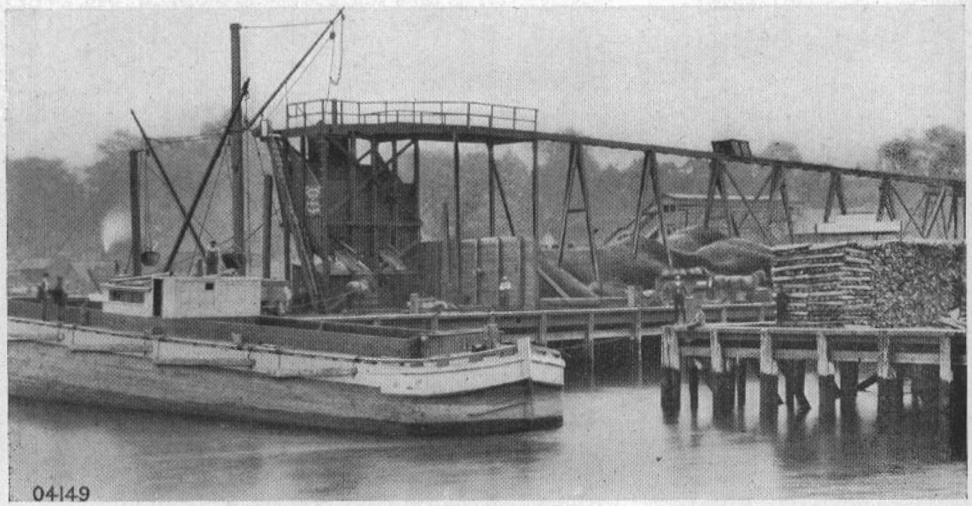
No. 9897.

Whitestone Forge and Construction Co., Whitestone, N. Y. Automatic Railway used to carry coal from the end of the pier to the storage building.

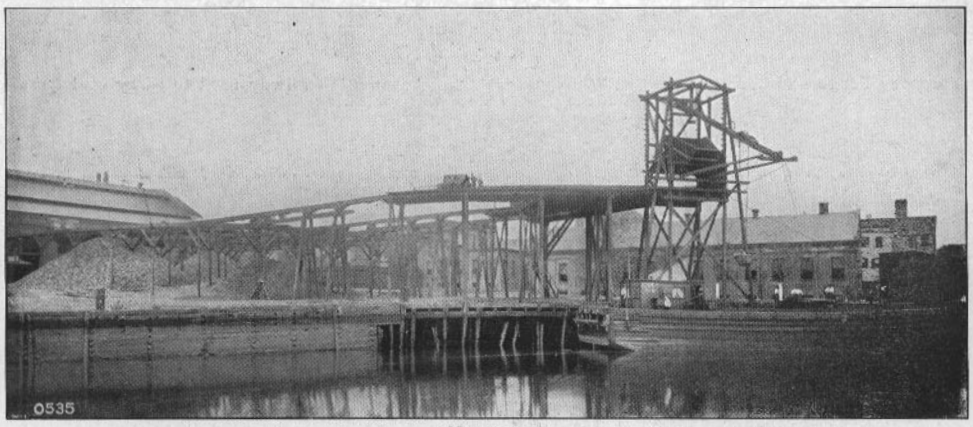


No. 0574.

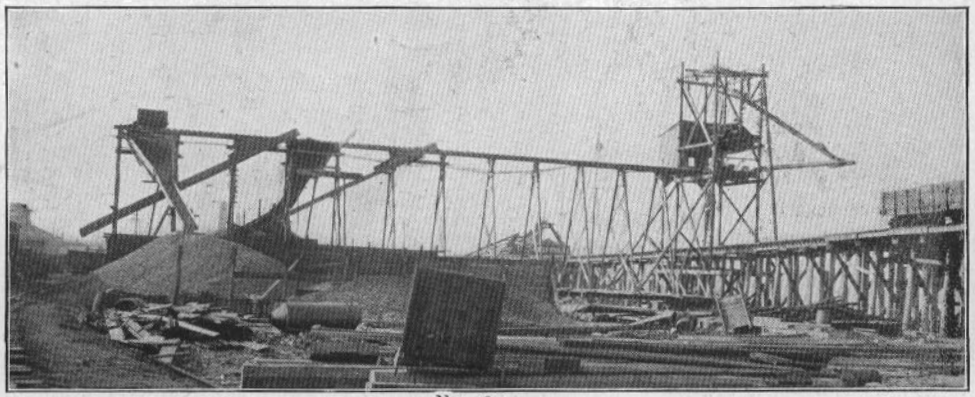
Calumet and Hecla Mining Co., South Lake Linden, Mich. Fifty-four Automatic Railway Tracks, with twenty two-ton cars and eleven Hunt Movable Elevators, comprise an addition of Hunt machinery to their already great coal-handling equipment.



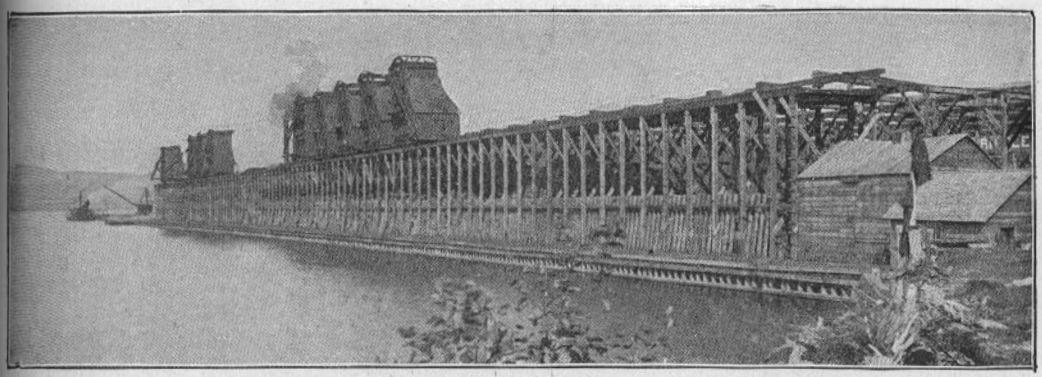
No. 04149.
Automatic Railway with mast and gaff outfit, handling coal in a dealer's yard.



No. 0535.
Citizens' Gas Light Company, Brooklyn, N. Y. Two Automatic Tracks with curves at the wharf end.

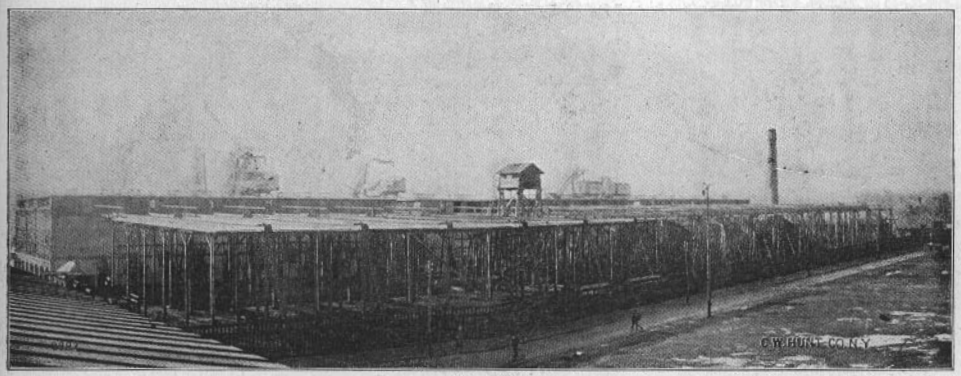


No. 0820.
Mobile Coal Co., Mobile, Ala.



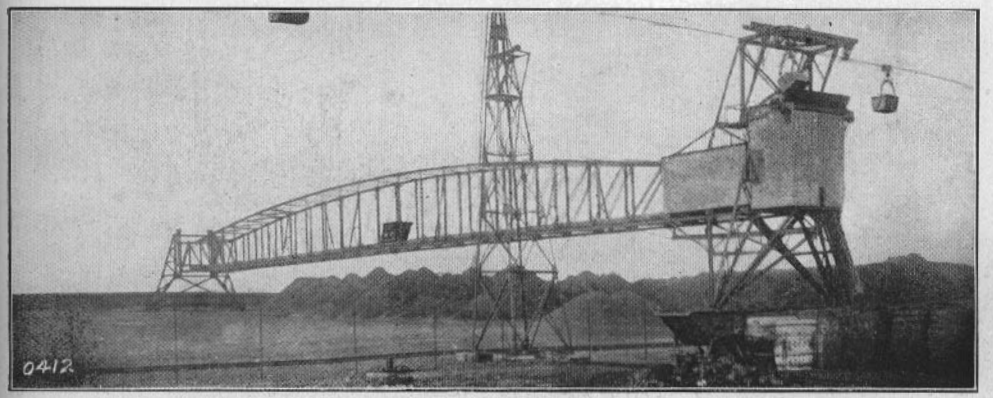
No. 96.

Lehigh Coal and Iron Co., wharf 2,000 feet long, 300 feet wide, West Superior, Wis. Seventy-five Automatic Railways and nine Movable Elevators. Capacity for unloading from vessels, 7,000 tons per day.



No. 9887.

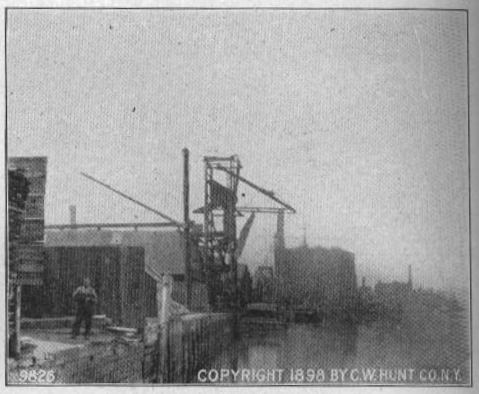
Danish Coal Company, Copenhagen, Denmark.



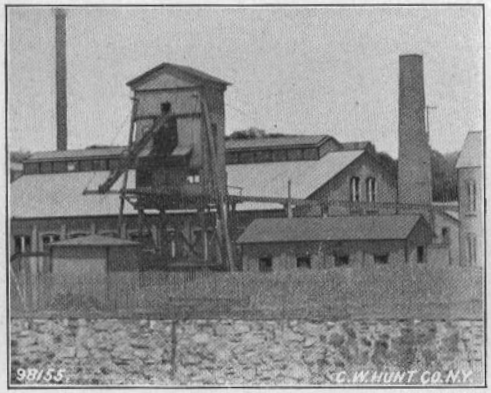
No. 0412.

Chemische Fabrik Greisheim Elektron, Greisheim, Main. Automatic Railway, showing arrangement for automatically tilting the ropeway carrier into the bin from which the car is loaded.

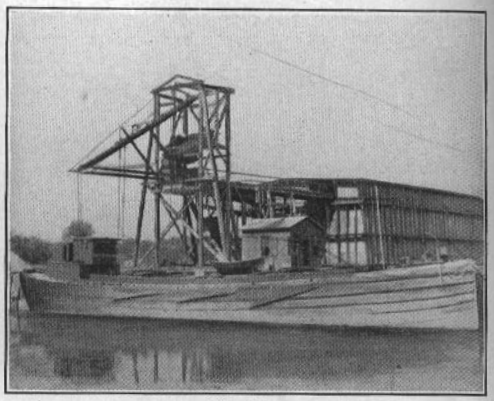
No. 9831.
Providence Gas Light Co., Providence, R. I.
Two Automatic Railways.



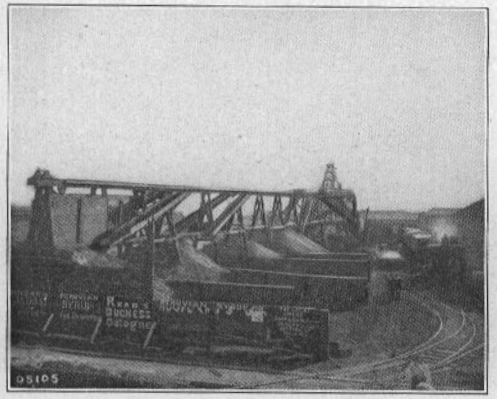
No. 9826.
Newark Gas Light Co., Newark, N. J.



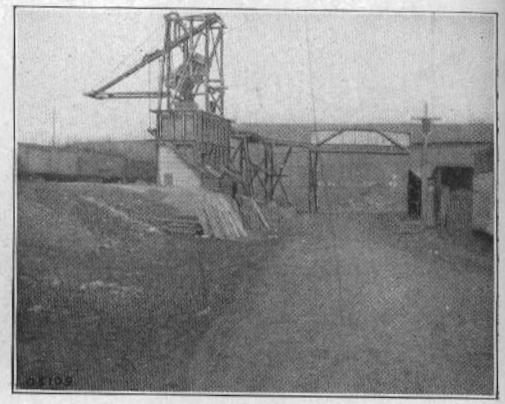
No. 98155.
Benedict & Burnham Mfg. Co., Waterbury, Conn.



No. 9824.
Taunton Gas Light Co., Taunton, Mass.

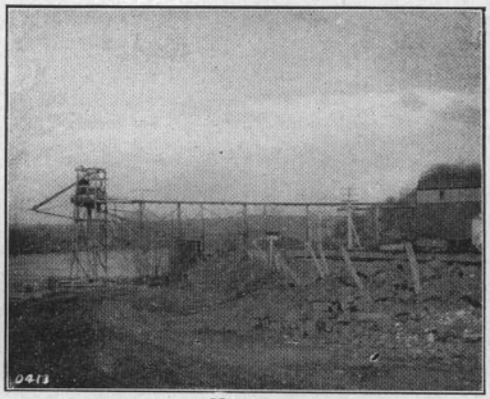


No. 05105.
Automatic Railway in a coal yard.

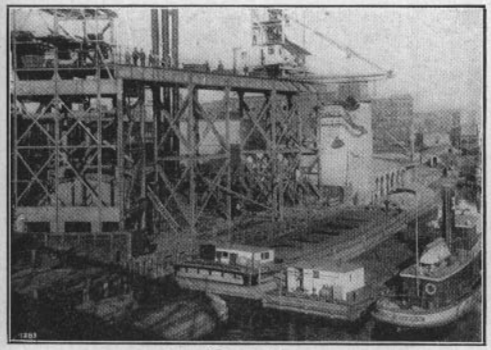


No. 05109.
A. C. Van Burer, Amsterdam, N. Y.

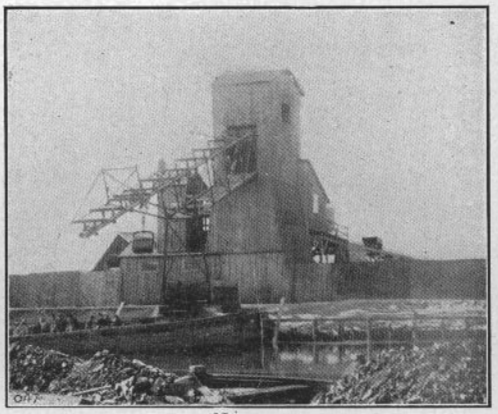
No. 9823.
Robert Henderson, Philadelphia, Pa.



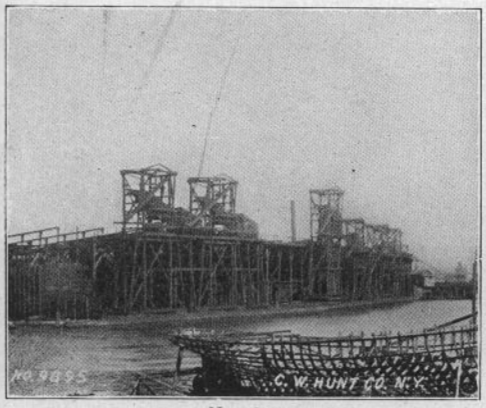
No. 0413.
Hartford Coal Co., Hartford, Conn.



No. 03283.
Manhattan Elevated Railroad, 129th Street and Second Avenue, New York.

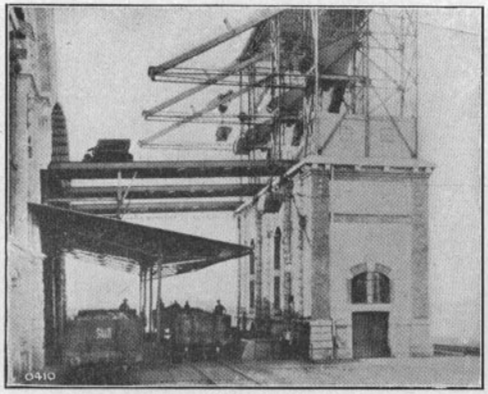


No. 047.
Swedish State Railway, Goteborg, Sweden.

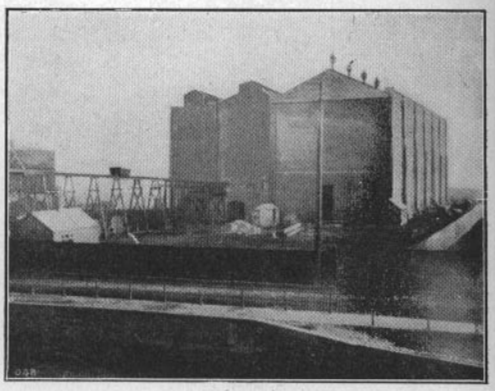


No. 9895.
Robert Law, Chicago, Ill. Six Elevators and fifteen Automatic Railways. The coal shed covers five acres.

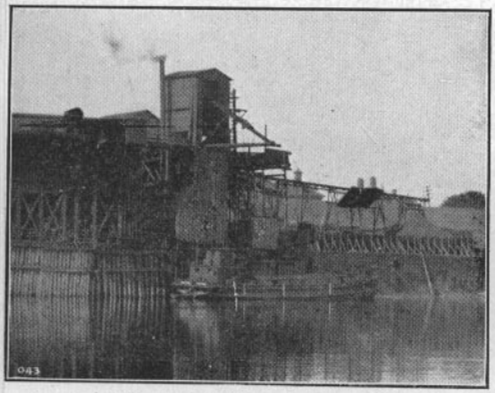
No. 9830.
Barnard & Dayton, Hudson, N. Y.



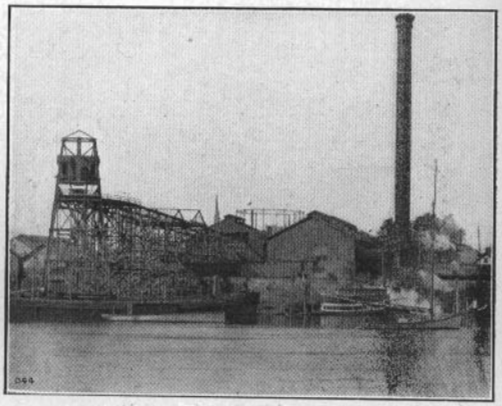
No. 0410.
City of Zurich Gas Works, Zurich, Switzerland.



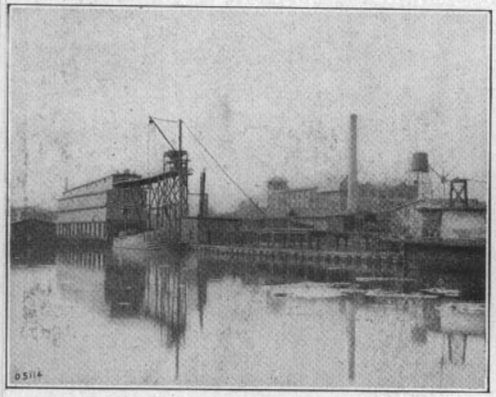
No. 048.
Avonbank Electricity Works, Bristol, Eng.



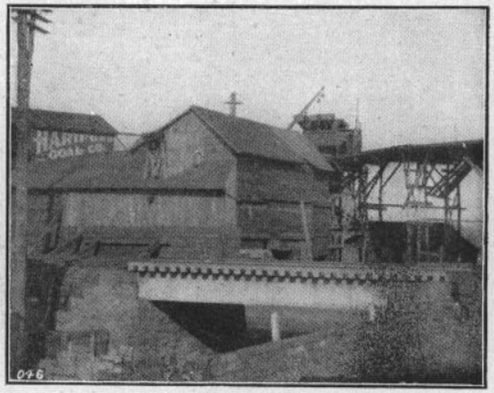
No. 043.
W. C. Mason & Co., Hartford, Conn.



No. 044.
Hatch & North Coal Co., Hartford, Conn.

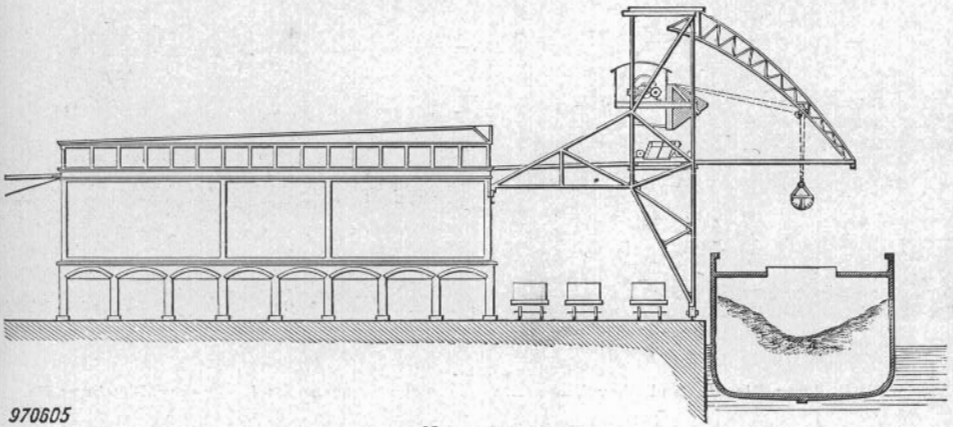


No. 05114.
Ibert Brewing Co., Brooklyn, N. Y.



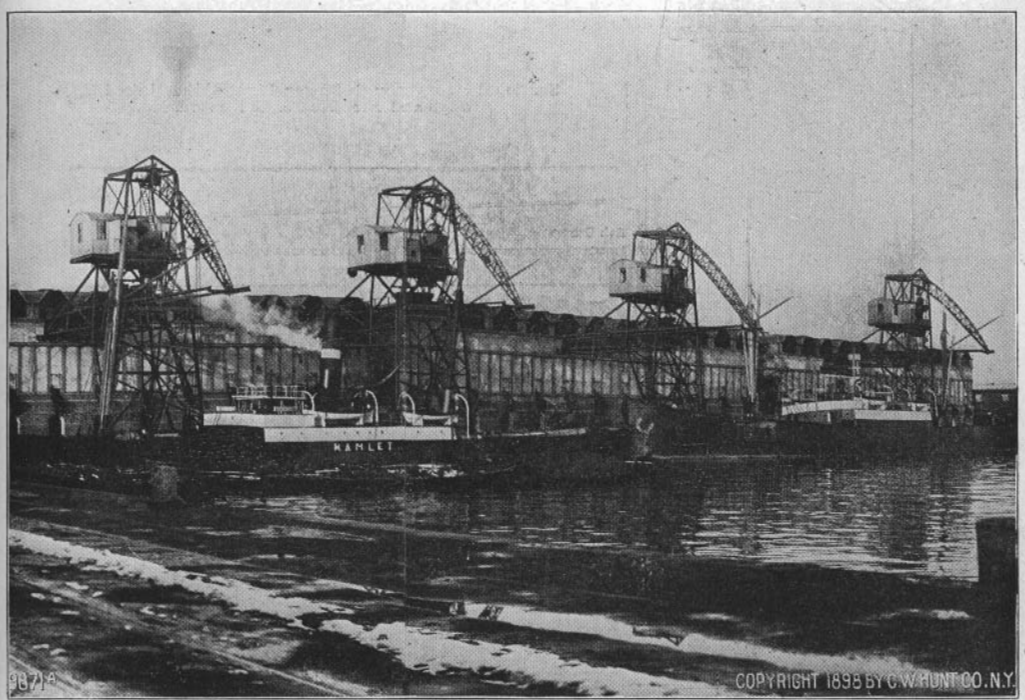
No. 046.
Hartford Coal Co., Hartford, Conn.

Danish Coal Company, Copenhagen, Denmark.



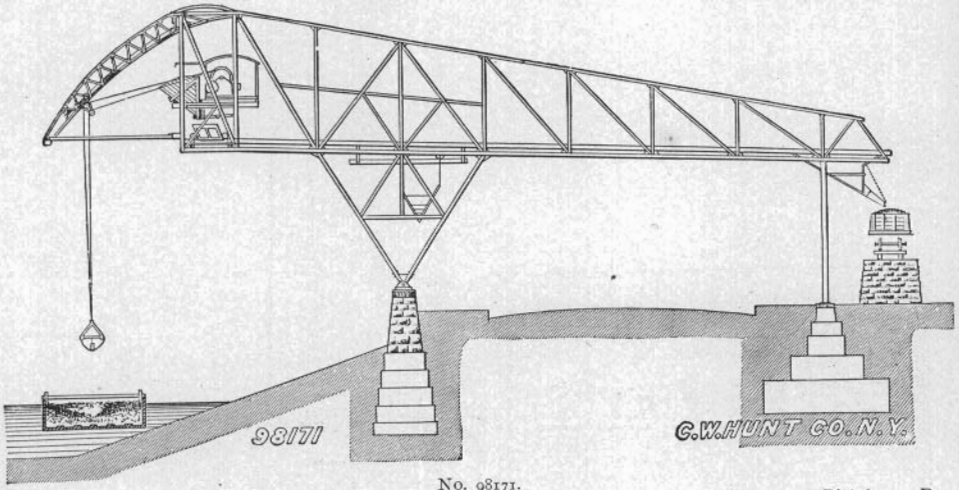
No. 970605.

Sectional View of Automatic Railway and Coal Elevator, Danish Coal Company.
Also see illustration below, No. 9871 A.

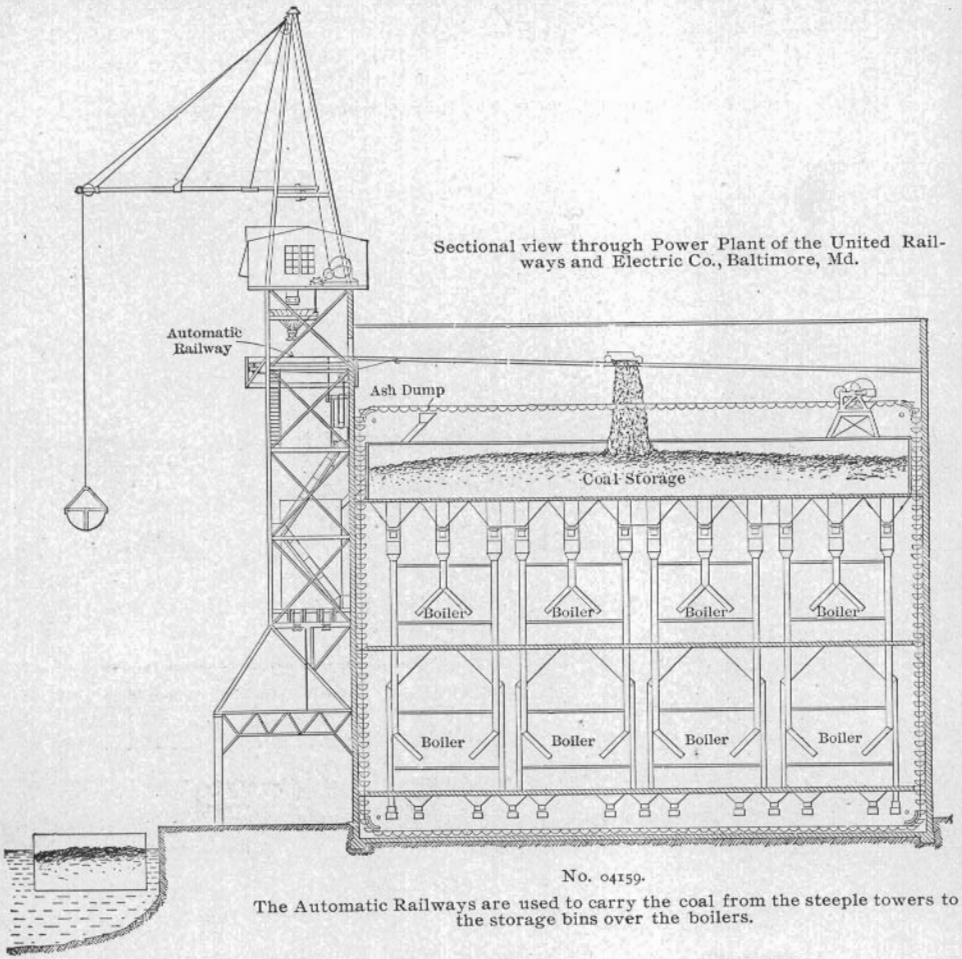


No. 9871 A.

Coal Handling Plant of the Danish Coal Company, handling and storing three hundred thousand tons of coal per annum. There are five Hunt Movable Hoisting Towers, the rear of each supported on a track on the coal pocket, leaving the wharf free for railway traffic. Each tower is equipped with a Hunt Two-ton Steam Shovel, and Hoisting Engine for operating same. Two-ton Automatic Railway Cars and thirty-seven Automatic Tracks are in the pocket to carry the coal to the various bins at the rate of 500 tons per hour.



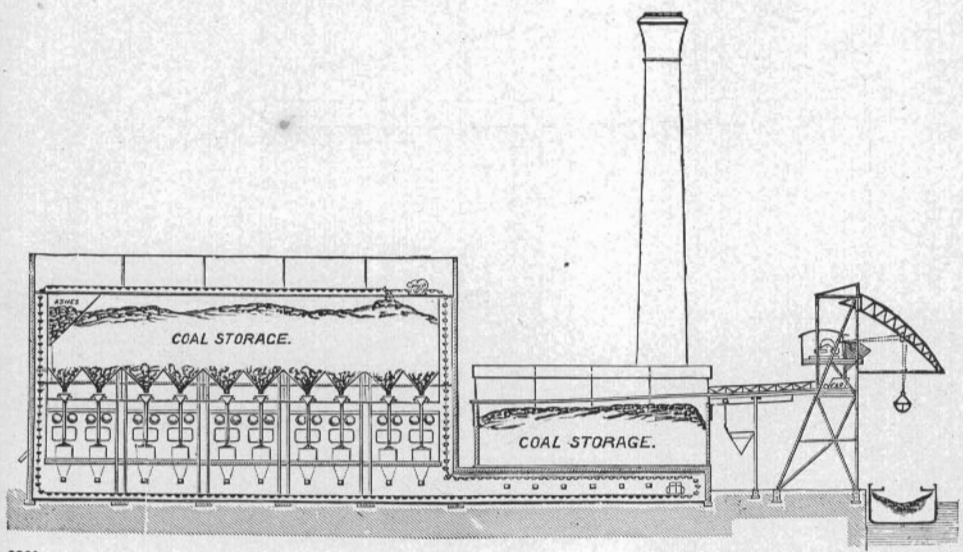
No. 98171.
Automatic Railway, Elevator and Shovel, as arranged for the Crescent Steel Company, Pittsburg, Pa.



Sectional view through Power Plant of the United Railways and Electric Co., Baltimore, Md.

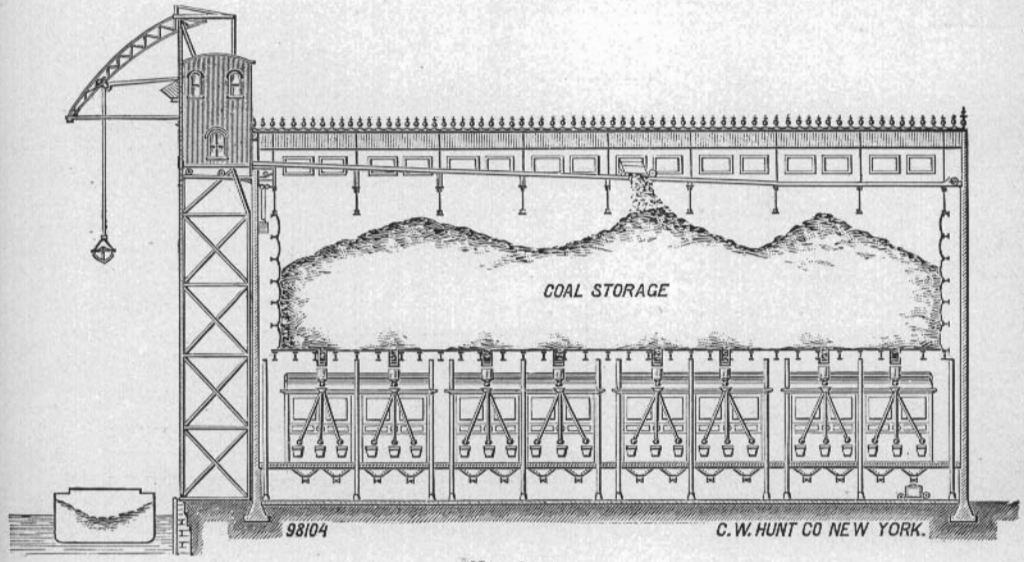
No. 04159.
The Automatic Railways are used to carry the coal from the steeple towers to the storage bins over the boilers.

AUTOMATIC RAILWAYS HANDLING COAL IN POWER STATIONS.



No 9809.

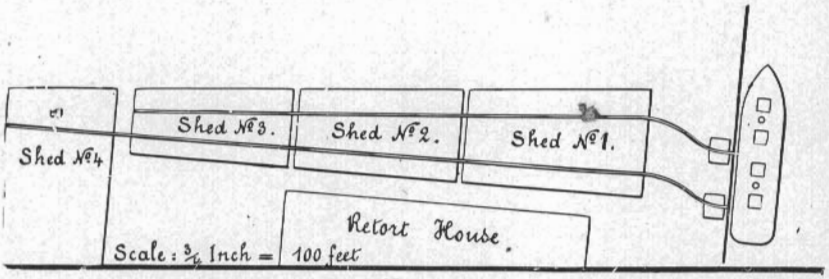
Plant of the Dublin United Tramways, with Hunt Automatic Railway, Dublin, Ireland.



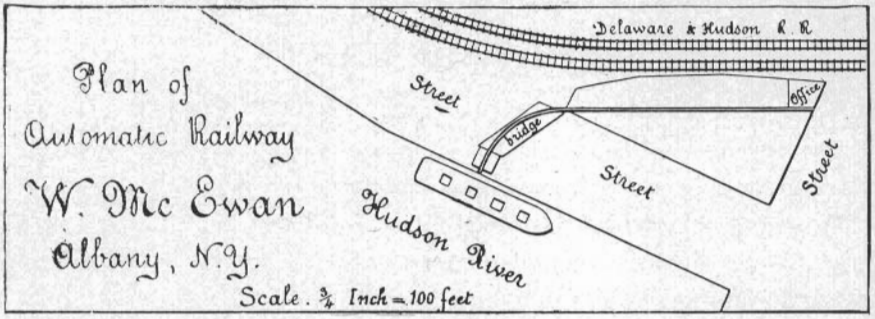
No. 98104.

Kings County Electric Light and Power Company, Brooklyn, N. Y.

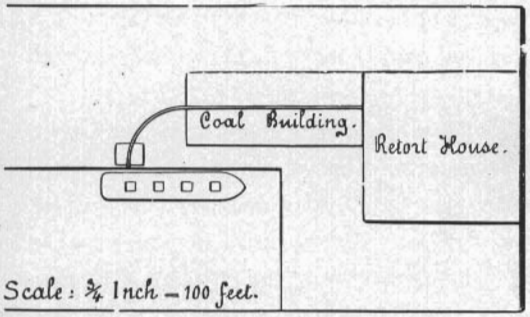
AUTOMATIC RAILWAYS HANDLING COAL IN POWER STATIONS.



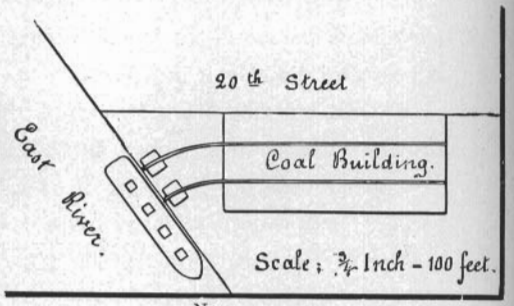
No. 54.



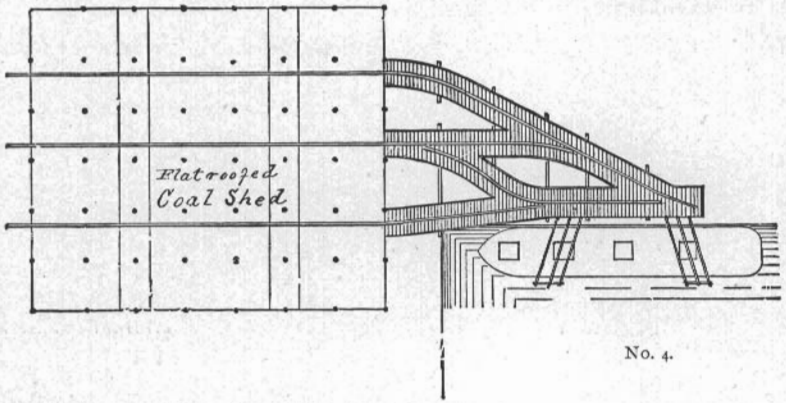
No. 55. (See letter on page 36.)



No. 40.



No. 57.



No. 4.

Plan of Automatic Railway Curved Tracks at Yard of S. Tuttle, Son & Co., Brooklyn, N. Y.
(See letter, page 34.)

REPAIR PARTS.

The machinery of this Company is made up of interchangeable parts, and a full line is kept in stock ready for immediate shipment.

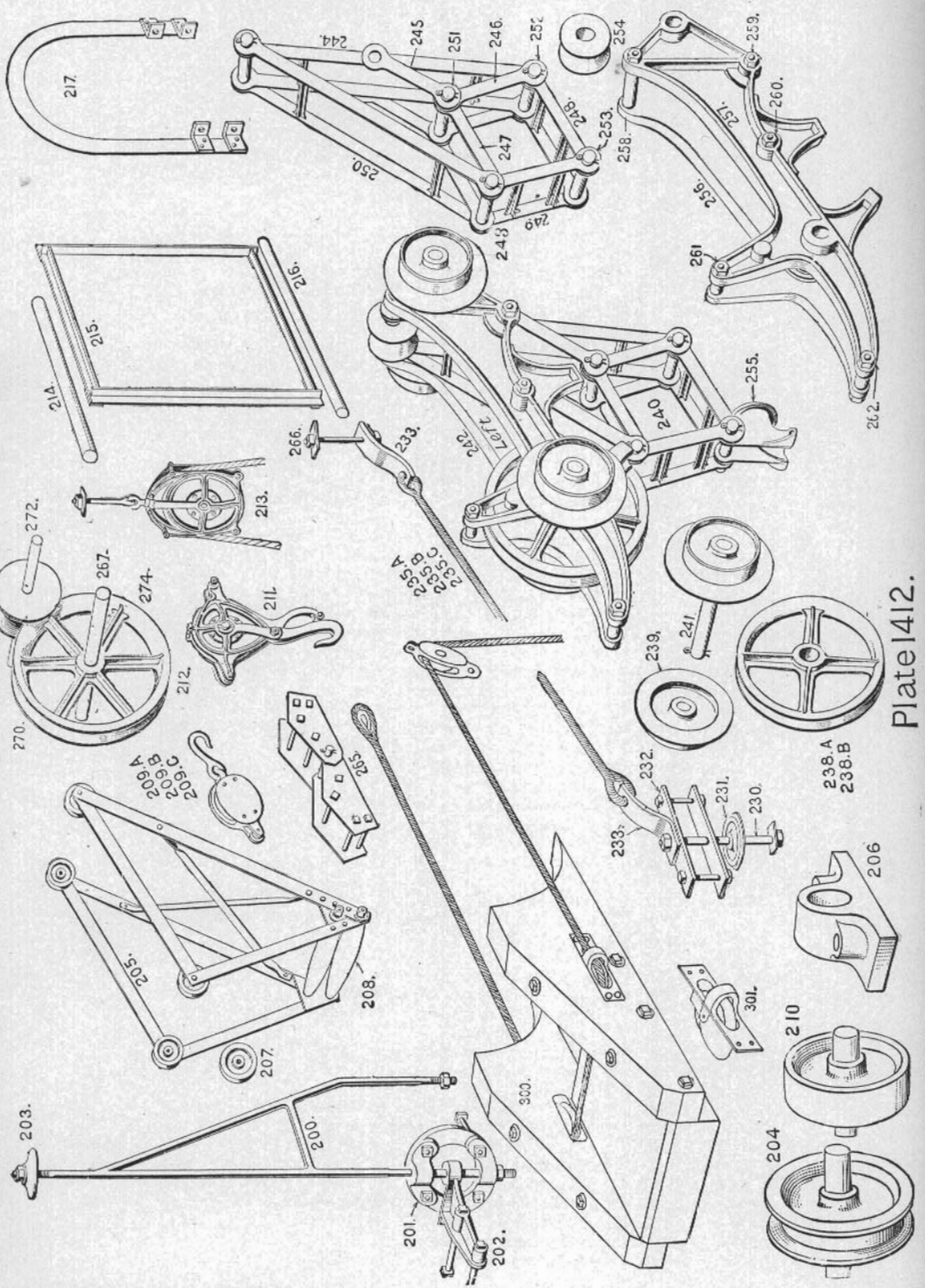
In order that customers may identify the parts they wish to replace, we have prepared sketch engravings, showing the parts of our Automatic Railway, Cars and Hoisting Elevator most likely to be called for.

Lists are given on the following pages containing the order number, engraving number, and name of each part. The engravings are helpful in identifying the various parts, and the use of the numbers in ordering will tend to avoid delays caused through imperfectly describing the parts.

When ordering any article from the lists of repair parts, customers should carefully examine the engravings as well as the description before writing out the order.

When ordering by letter it is safer to give the "order number," "engraving number," and the "descriptive name" of the article. When ordering by telegram the "order number" is sufficient. In this case, however, Arabic figures should not be used but the words fully written out on the telegraphic blank, using code words if desired, in order to avoid errors in transmission. The telegraph codes used by this Company are "A1," "Liebers," "A B C" (Fourth and Fifth Editions), "Western Union."

AUTOMATIC ELEVATOR DETAILS.

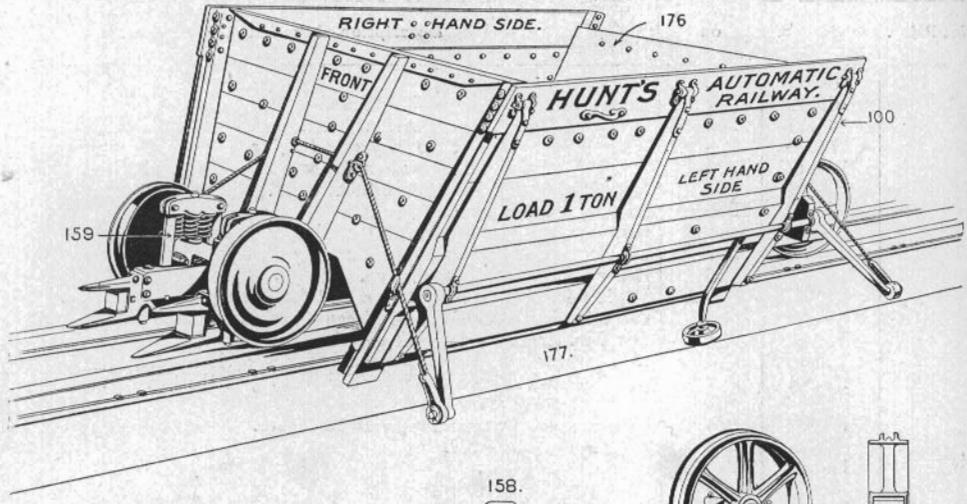


Elevator Details to Accompany Engraving No. 1412.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Net Price.	Order No.	Number on Engraving	Description of the Parts.
	64517	200	Boom suspender forging.
	64572	201	Suspender hinge plate without bolts.
	64571	202	Suspender hinge bracket without bolts.
	15004	203	Washer for the top of the suspender forging.
	108517	204	Double-flanged wheel pressed on the axle for movable elevator.
	108501	205	Dumping carriage complete without track.
	12005	206	Bearing box for elevator wheels.
	108519		Grip iron and bolt for holding the elevator to T rail.
	5806	207	Double-flanged track wheel for dumping carriage.
	8006	208	Roller for the dumping carriage.
	106030	209 A	Single 6-in. tackle block with bracket for moving the chock block.
	106038	209 B	One 9-in. double-tackle block without bracket.
	106037	209 C	One 9-in. single-tackle block with bracket.
	108518	210	Flat tread wheel pressed on the axle for movable elevator.
	106001	211	Elevator 10-in. sheave tub block for hooking on the tub.
	4506	212	Traversing sheave for manila rope.
	106024	213	Throat block, for manila rope, 16-in. sheave.
	54328	214	Hopper door-hinge rod.
	108503	215	Hopper door frame.
	54323	216	Hopper door-toggle hinge shaft.
	108506	217	Bow-iron forging for the boom tracks.
	89075	230	Lower stay bolt for fastening to the crosspiece. 1 in. x 15 in., drilled for cotter ¼ in.
	15007	231	Washer for No. 230.
	81011	232	Wrought-iron plates for No 230, without bolts.
	64519	233	Goose neck for the end of the wire rope boom stays.
	108516	235 A	Wire rope stay with goose necks spliced in both ends. 24-ft. projection.
	108515	235 B	Wire rope stay with goose necks spliced in both ends. 28-ft. projection.
	108514	235 C	Wire rope stay with goose necks spliced in both ends. 32-ft. projection.
	108507	237	Two wheels on an axle complete for boom truck.
	4018	238 A	Centre manila rope sheave for the boom truck.
	4015	238 B	Centre wire rope sheave for the boom truck. 1½-in. bore.
	6009	239	Boom truck wheel. Specify whether to be loose or rigid on the axle.
	108509	240	Link work complete with rope eye ready to put in the truck.
	115568	241	Boom truck wheels and axle complete.
	115550	242	Boom truck complete, ready to work.
	53806	244	Link pattern No. C 11.
	53803	245	Link pattern No. C 15.
	53802	246	Link pattern No. C 14.
	53800	247	Link pattern No. C 13.
	53804	248	Link pattern No. C 16.
	53801	249	Link pattern No. C 12.
	53805	250	Link pattern No. C 10.
	2365	251-252 253-243	Pin with cotters. Specify the diameter and the distance centre to centre of cotter hole.
	8007	254	Idle roller for manila rope.
	68002	255	Rope eye for the link works.
	30002	256	Boom truck frame, left-hand side.
	30003	257	Boom truck frame, right-hand side.
	53340	258	Upper frame stud.
	53343	259	Stud in the frame for the link work.
	53341	260	Centre spacing stud.
	53342	261	Rope wheel stud.
	53345	262	Stud for the lower end of the frame.
	108510	265	Toggle hinge for the hopper door. (One set.)
	89074	266	Upper bolt for wire boom stay.
	438	267	Traversing sheave shaft.
	4506	270	Traversing sheave.
	5808	271	Fender wheel for the traversing sheave.
	481	272	Fender wheel shaft.
	108504	300	Boom chock complete.
	108505	301	Side pulley in frame for boom chock.

AUTOMATIC RAILWAY DETAILS.



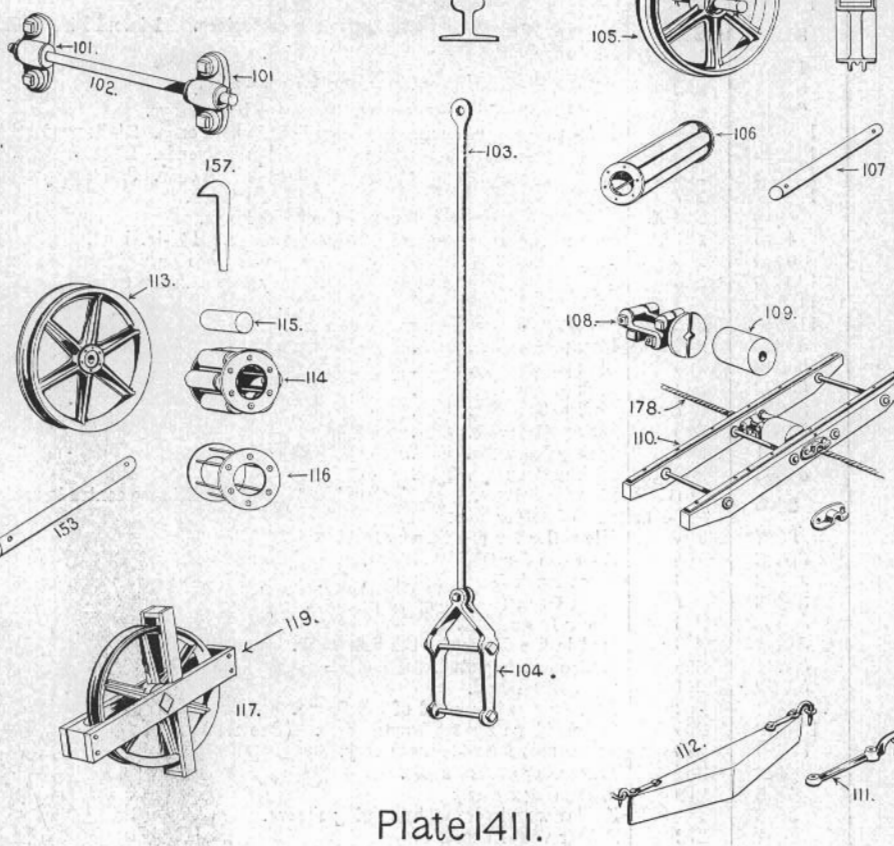


Plate 1411.

Automatic Railway Details to Accompany Engravings Nos. 1411 and 1409.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Net Price.	Order No.	Number on Engraving	Description of the Parts.
	103000	100	Automatic railway car complete, wheel flanges outside the rails.
	43030	101	Triangle hinge bearing.
	1615	102	Triangle hinge shaft.
		103	Triangle wheel rod.
	43009	104	Triangle clevis with bolts.
	106188	105	Double-groove triangle wheel with patent roller bearing and pin.
	105545	106	Roller bearing for double-groove triangle wheel.
	2372	107	Pin for double-groove triangle wheel with cotters.
	105511	108	Clamp for wire rope with bolts complete. ⅜-in. rope.
	17903	109	Rubber spring for wire rope cross-bar.
	105515	110	Cross-bar for wire rope.
	43024	111	Dumping block hook.
	105517	112	Dumping block complete.
	106187	113	Single-groove sheave with patent roller bearing for wire rope at end of railway.
	05524	119	Wooden frame for sheave No. 113.
	105544	114	Roller bearing for sheave No. 113.
	2372	115	Roller for the bearing No. 114.
	105547	116	Roller frame for the bearing.
	105523	117	Sheave No. 113 in wooden frame complete.
	41217	118	Rope eye for the side of the automatic car.
	12165	121	Oil box for automatic car bearings, with cover.
	12166	122	Oil-hole cover for car bearing.
	41205	126	"A" frame for automatic car bearing.
	12112	127	Car bearing.
	41203	130	Pick-up iron, without the rubber spring.
	103009	131	Pick-up fitted with a rubber spring.
	17704	132	Rubber spring for pick-up.
	35504	133	Door-hinge strap for the rear hinge on the right-hand side.
	35504	134	Door-hinge strap for the middle hinge on the right-hand side.
	35504	135	Door-hinge strap for the front hinge on the right-hand side.
	35503	136	Door-hinge strap for the rear hinge on the left-hand side.
	35503	137	Door-hinge strap for the middle hinge on the left-hand side.
	35503	138	Door-hinge strap for the front hinge on the left-hand side.
	120		One set of door-hinge straps and ears Nos. 174 and 175 complete, for the right-hand side of the automatic car.
	123		One set for the left-hand side of the automatic car.
	41215	139	Malleable iron wire rope end, threaded.
	90000	124	Eye-bolt for No. 139.
	41216	140	Malleable iron end for wire rope.
	141		Wire rope without ends to hold the side doors closed.
	105521	142	Wire rope for car doors, fitted with ends complete.
	41211	143	Side rod for car door with wheel complete.
	5804	144	Side rod dumping wheel.
	108528	149	Bearing for straight line automatic car, rigid.
	108529	150	Bearing for straight line automatic car, adjustable.

AUTOMATIC RAILWAY DETAILS.

Plate 1409.

Automatic Railway Details to Accompany Engravings Nos. 1411 and 1409.

(CONTINUED.)

Net Price.	Order No.	Number on Engraving	Description of the Parts.
	102830	152	Two automatic car wheels with outside flanges, pressed on 1¼-in. axle complete.
	2371	153	Pin for wire rope sheave No. 113.
	6300	154	Automatic car wheel with outside flange bored for 1¼-in. axle.
	43031	157	Spikes for the automatic track with reverse points.
	158		T rail for automatic car track, with fish plates and spikes complete, per lineal foot of rail.
	17547	160	Steel bearing spring.
	41235	161	Under cap for rubber spring on inside flange-wheel car bearing.
	17900	162	One rubber spring for car bearing.
	41234	163	Upper cap for rubber spring on bearing.
	41200	164	Upper cap for nest-bearing spring.
	17515	165	One spiral spring for automatic car.
	41201	166	Under cap for nest-bearing spring.
	41214	167	Bracket for the wire rope on the side door.
	41206	168	Clip for the side rod on the car-door, front bearing.
	41207	169	Clip for the side rod on the car-door, middle bearing.
	41208	170	Clip for the side rod on the car-door, rear bearing.
	41210	171	Wire rope stop on the corner of the car.
	41211	172	Wearing piece for car stake, right hand.
	41212	173	Wearing piece for car stake, left hand.
	35502	174	Hinge ear for side door to go with Nos. 136, 137 and 138.
	35501	175	Hinge ear for side door to go with Nos. 133, 134 and 135.
	102002	176	Sheet-iron lining for car.
	178		Steel wire rope, length as ordered.

NOTES.

The gauge of the track is narrow, twenty-one inches out to out of rail heads.

Elevated tracks, either on a trestle or on timber at least twelve inches high, are necessary for our standard cars.

Curves not less than thirty feet radius are used only on the loading end of the railway.

Standard cars for anthracite and bituminous coal are carried in stock. Special cars with a steep bottom for phosphates, and cars for broken stone, iron ore, etc., are made to order.

The sides of the cars open out in dumping, requiring a space of nearly nine feet for the one-ton car, and eleven feet for the two-ton car. If the material is heavy, like iron ore or stone, the body of the car is made smaller, to carry only the required weight.

Scales must have an extra distance from the platform to the beam, to give room for the automatic car to return with the sides open.

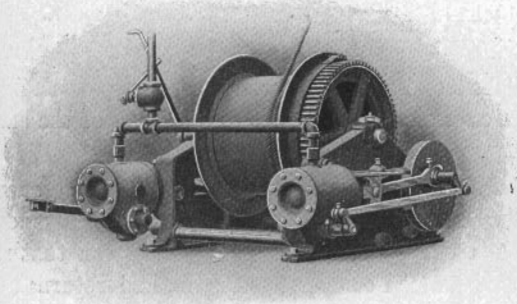
Two styles of returning weights are used: the "triangle," for all lengths of tracks, and the "vertical" weight for short tracks where space for the "triangle" is not available.

The grade is always downward from the loading end, but it varies at different points.

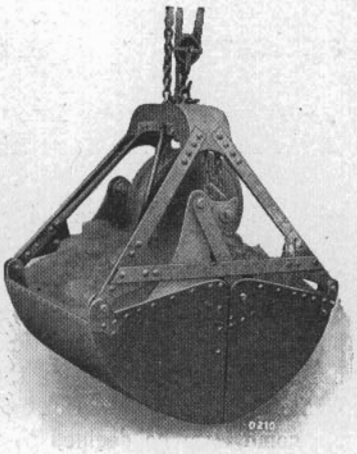
Machinery for hoisting coal from the vessel to the car platform is not described in this catalogue.

WORKING PARTS.

WE SUPPLY THE CAR LINED WITH STEEL COMPLETE, THE STEEL WIRE ROPE, ROPE SHEAVES WITH PATENT ROLLER BEARINGS, CROSS-BAR, RAILS, SPIKES, FISH JOINTS, AND ALL THE WORKING PARTS FOR THE RETURNING WEIGHT, TOGETHER WITH DRAWINGS FOR THE ERECTION. THE INTENTION IS TO FURNISH EVERY PART SO THAT THE PURCHASER WILL HAVE NO BLACKSMITH OR MACHINE SHOP BILLS TO PAY. CURVED TRACKS REQUIRE A SPECIAL OUTER RAIL TO SUIT THE FLEXIBLE RUNNING GEAR USED ON THESE CARS. THESE AUTOMATIC CARS AND ALL PARTS OF THE MACHINERY ARE ALWAYS KEPT IN STOCK, AND IMMEDIATE SHIPMENTS CAN BE MADE. COAL HOISTS FOR TAKING COAL FROM VESSELS, SCALES FOR WEIGHING, AND VALVES FOR LOADING FROM A HOPPER INTO THE CAR, ARE FURNISHED IN GREAT VARIETY TO SUIT THE LOCAL REQUIREMENTS.

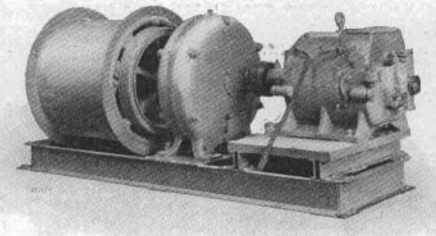


No. 990022.
Steam Hoisting Engine.
We publish a catalogue on Steam Hoisting Engines.



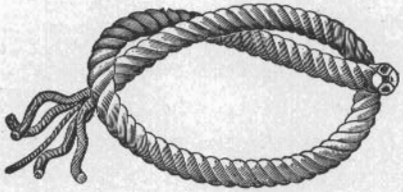
No. 0210.
The Hunt Steam Shovel.
We have a catalogue containing illustrations and description of this shovel, which will be sent on request.

No. 0192.
Coal Tub, Side Lever.
We make two styles of coal tubs, and issue a catalogue containing a description of the styles and dimensions.



No. 03174.
Electric Coal Hoist.
Electric Hoist catalogue will be sent on request.

No. 0060.
16-inch Sheave Hook Block.
A full description and much interesting information concerning hoisting blocks are to be found in our "Coal Handling Machinery" catalogue.



No. 1196.
"Stevedore" Rope.
"Manila Rope" is the subject of a treatise which we have just published. It contains 48 pages of interesting data that cannot be obtained elsewhere.

We will take pleasure in forwarding any of the above catalogues on receipt of request from firms interested in the subject of coal or ore handling.

Testimonials.

For many years we have not published testimonials of the satisfactory work done by our machinery. We now print a few, expressing the purchaser's opinion of the same apparatus after from twenty to thirty-two years of active service.

The first Automatic Railway was built in 1871, when labor troubles were general on coal wharves, and trade unions of "wheelers" were dictators of the management, the coast, and the amount of coal taken out per day. The automatic car that ran down the track two hundred feet, dumped its load of coal in the bin, and returned to be reloaded, without attention from the workman, attracted great attention from boat captains unloading at the wharf, and from their reports Mr. A. P. Day, of the firm of S. Tuttle, Son & Co., coal dealers, visited the railway, and after watching it work for some time he decided to build one. What he thought soon after, and what he thinks after twenty-five years' use, appears below.

IN USE THIRTY YEARS.

Elias Lyman Coal Company,
Late Wilkins & Lyman,
Burlington, Vermont.

BURLINGTON, VT., June 30, 1876.

C. W. Hunt, Esq.:

Dear Sir:—* * We have not used the Railway very much, but all we have done with it has been entirely satisfactory.

Yours truly,
WILKINS & LYMAN.

BURLINGTON, VT., October 9, 1905.

C. W. Hunt Company:

Gentlemen:—We have had two of your Automatic Railways in constant use for the last thirty years. For all that I can see, they do as good work to-day as they did when first placed in position.

The expense for repairs has been merely nominal. If we were to put up another shed through which to handle coal received by water, we should surely ask you to put in your system, as we have never seen a better one.

Yours truly,
ELIAS LYMAN, Pres.

AFTER TWENTY-FIVE YEARS.

S. Tuttle, Son & Company,
Coal Dealers, Brooklyn, N. Y.

BROOKLYN, December 20, 1873.

Mr. C. W. Hunt:

Dear Sir:—Your Automatic Railway and Car, that you put in our yard some two years ago, has given us perfect satisfaction in the economy of handling coal, and also in the saving of time in unloading the boats. It accomplishes all that we expected or could ask of it.

Having examined many of the appliances for storing coal in yards, we consider your road BY FAR THE BEST AND MOST PERFECT of any that has come under our observation for saving time and labor

We can CONFIDENTLY RECOMMEND it to any one who has need of a railway for the purpose mentioned. Very truly yours,

S. TUTTLE, SON & CO.

BROOKLYN, N. Y., April 1, 1898.

Messrs. C. W. Hunt Company:

Gentlemen:—In answer to your request as to our opinion of your Automatic Railway and Car, we would say, that, having had one in use for over twenty-seven years, and three for ten years, they have given the best satisfaction. We consider them the most economical and satisfactory way of handling coal. They are always ready to work, never loaf on the way up or down, require no power, very little repairs, and do not require an expert to run them. The one we put in twenty-seven years ago was the first ever used outside of your own yard, and is still at work. Yours truly,

S. TUTTLE, SON & CO.

As this Railway is still in operation, it brings it up to thirty-two years it has been running.

HAS BEEN WORKING TWENTY-FIVE YEARS.

Charles Warner & Company,
Coal Dealers, Wilmington, Del.

WILMINGTON, DEL., September 28, 1874.

C. W. Hunt, Esq., Trinity Building, N. Y.:

Dear Sir:—Yours of the 26th inst., asking if the wind affects the running of the car, is received. In reply, we have to say that the wind or anything else has given us no trouble since minor matters, consequent upon the erection of new machinery, have been adjusted. We are working the railway and elevator day after day without interruption. Their ability to deliver coal at any point in our yard is only limited by our inability to fill the tubs in the boat as fast as the machinery can move the coal from boat to destination. It requires only twenty-four (24) seconds for the car to run the entire length of the track (200 feet), dump the load, and return to head of plane. It will afford us pleasure to show our machinery to any one you may refer to us. We think we owe you this.

Truly yours, CHARLES WARNER & CO.

WILMINGTON, DEL., March 24, 1898.

Messrs. C. W. Hunt Company,
45 Broadway, N. Y.:

Gentlemen:—We have been using your Automatic Railway for about twenty-five years. We really do not remember the date it was erected. It has cost us very little for repairs to the present time, but, of course, we shall have to rebuild soon, which we shall do some time this year or early next.

It has always given us pleasure to deal with you, as your products have always been entirely satisfactory to us. Yours very truly,

E. T. WARNER, President.

TWENTY-FIVE YEARS' EXPERIENCE.

C. D. Willits,
Coal Dealer, Brooklyn, N. Y.

BROOKLYN, December 21, 1873.

C. W. Hunt, Esq.:

Dear Sir:—In reply to your inquiry, I am pleased to say that after six months' use of the "Automatic Railway" I am well satisfied, having used it at different distances and found it to work well—dumps its load and returns to its starting place automatically.

My establishment is so arranged that one man can hoist the coal from the vessel, dump the tub, weigh the load, and attend the cart; but usually I have two, as it gives quicker dispatch.

Very respectfully yours, C. D. WILLITS.

BROOKLYN, N. Y., April 6, 1898.

C. W. Hunt Company, 45 Broadway, N. Y.:

Gentlemen:—Replying to your inquiry, I am not using your Automatic Railway now, having sold my coal yard and that with it, but during the time I had it, about fifteen years, it gave good satisfaction; in fact, I felt that I could not do without it. I think to this day, notwithstanding the introduction of later exploited machinery, that the Hunt Automatic Railway is the best.

Yours respectfully, C. D. WILLITS.

JUST AS SATISFACTORY AFTER TWENTY-FOUR YEARS.

Charles S. Clark,
Coal and Wood, Salem, Mass.

SALEM, MASS., September 29, 1874.

C. W. Hunt, Esq.:

Dear Sir:—I am much pleased with the operation of your Automatic Railway that I got in operation in June last, and especially would I recommend its adoption by all in the coal trade, as it makes a great saving in the expense of handling coal.

My furthest bin, 120 feet from the starting point, can be easily and quickly filled, and at no greater expense than the bin at the front of the dock. The car takes twenty-two seconds to run to the furthest bin, drop its load, and return to be reloaded.

It makes a saving to me each and every day it runs of about fifteen dollars in my wheeling expenses, which I think satisfactorily shows an improvement from the old method of handling coal. I cheerfully recommend it to all.

I remain, very truly yours, C. S. CLARK.

SALEM, MASS., March 26, 1898.

C. W. Hunt Company:

Gentlemen:—In reply to yours of the 22d instant, I wish to say I take nothing from my statement of September 29, 1874.

The Automatic Railway has for these twenty-four years always proved satisfactory in economy and durability. Very little expense in the system, and in fact I now have the same car, although it has carried more than 50,000 tons of coal, and is now in good order, with new sides. The new railway, in the adjoining shed, has now been running some ten years, and is just as satisfactory in its operation. I remain,

Yours truly,

C. S. CLARK.

AFTER TWENTY YEARS.

Cocheco Print Works,
Dover, New Hampshire.

DOVER, N. H., July 20, 1878.

C. W. Hunt, Esq.:

Dear Sir:—We can take coal out as fast as four men can shovel it. The whole thing seems to be giving entire satisfaction. Yours truly,

A. A. FAIRBANKS,
Engineer.

DOVER, N. H., March 30, 1898.

C. W. Hunt Co., 45 Broadway, N. Y.:

Gentlemen:—The Automatic Railway which you put in for this company some twenty years ago is still working to our satisfaction. The repairs on the apparatus itself have been slight. We expect to handle about twenty thousand (20,000) tons of coal with it between April 1 and November 1.

Yours truly, C. H. FISH, Agent.

TWENTY-NINE YEARS IN ACTIVE USE.

ROCHESTER, N. Y., June 22, 1905.

C. W. Hunt Company, West New Brighton, N. Y.:

Gentlemen:—Replying to your Mr. Gildersleeve's letter of the 9th *re* Automatic Railway and Elevator you sold to this plant April 22, 1876, it gives us pleasure in expressing our complete satisfaction with its past and present working. We use the apparatus for unloading clay from canal boats and depositing the same in our storage pit, 100 to 200 feet distant. Loading the buckets by hand, we unload a cargo of 160 to 170 tons in 10 hours. The repairs since its installation, twenty-nine years ago, have been purely nominal and consist solely of replacing decayed or worn-out woodwork at intervals, also wire cable and one pulley block; otherwise it is the same machinery installed in 1876.

Respectfully, ROCHESTER SEWER PIPE COMPANY.

(Signed) WILLIAM H. GORSLINE, Treas. and Supt.

WORKING TWENTY-EIGHT YEARS.

William McEwan,
Coal Dealer, Albany, N. Y.

ALBANY, N. Y., October 10, 1905.

Messrs. C. W. Hunt Company:

Gentlemen:—Yours of the 6th inst. at hand, and in reply thereto would say that I have used your Automatic Railway since 1878, and it is still in service. It has given perfect satisfaction, and more than met our expectation in its economy of operation and repairs.

It crosses a public street some fifty feet wide on a curve, and during all these years we have never had an accident. Yours very truly,

WILLIAM McEWAN.

MIDDLETOWN, CONN., November 11, 1873.

C. W. Hunt, Esq.:

Dear Sir:—We had a great race the other day with the railway. One captain reached here on Monday morning for another firm, and began work. His rival, who got caught on the bar, reached here about 5 P. M. He was in great distress and felt afflicted to think he was beaten. We harnessed up the car, began work at 6 P. M., and at 4 A. M. the last of the 151½ tons was gently dropped in the shed. That morning at 7, the first began working again at the rear end of his cargo, or at the middle, rather; and his language, when he saw his rival gently moving up to the quarries, was tremendous and calculated to appall the stoutest heart. Your machine is not a moral engine at all, as we were led to suppose.

With best wishes, truly, DAVIS BROTHERS.

Press of The Kalkhoff Co., 251 William St., N. Y