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Street, in the city of Brooklyn at its junction with Ninth Avenue.

We furthur find that no poles or supports should be erected within the roadway, but that the same should be erected in the sidewalk at the curb line.

That the circles at the intersection of Fifteenth Street and Coney Island Avenue, and at the intersection of Fifteenth Street and Ninth Avenue, should be spanned in a suitable and proper manner, and no support should be erected in the roadway therein.

That the necessary structure, motors and all appliances used should conform to the best models in practical use and should be surrounded with every safeguard to life and property known to practical experience.

And we find and determine against a change to the trolley system of propulsion across the said circle at the southwesterly entrance to Prospect Park, and that horse power only should be permitted across the same.

That no poles or supports should be erected within the extreme circumference of said circle and no wires suspended across the same or any part thereof, but that the said railroad company should be permitted to carry the electric current across the same by an underground wire properly insulated, so as to involve the least possible danger to life and property.

Dated November 16, 1891.

JOHN WINSLOW,
MARSHALL S. DRIGGS, } Commissioners.
JOSIAH T. MAREAN.

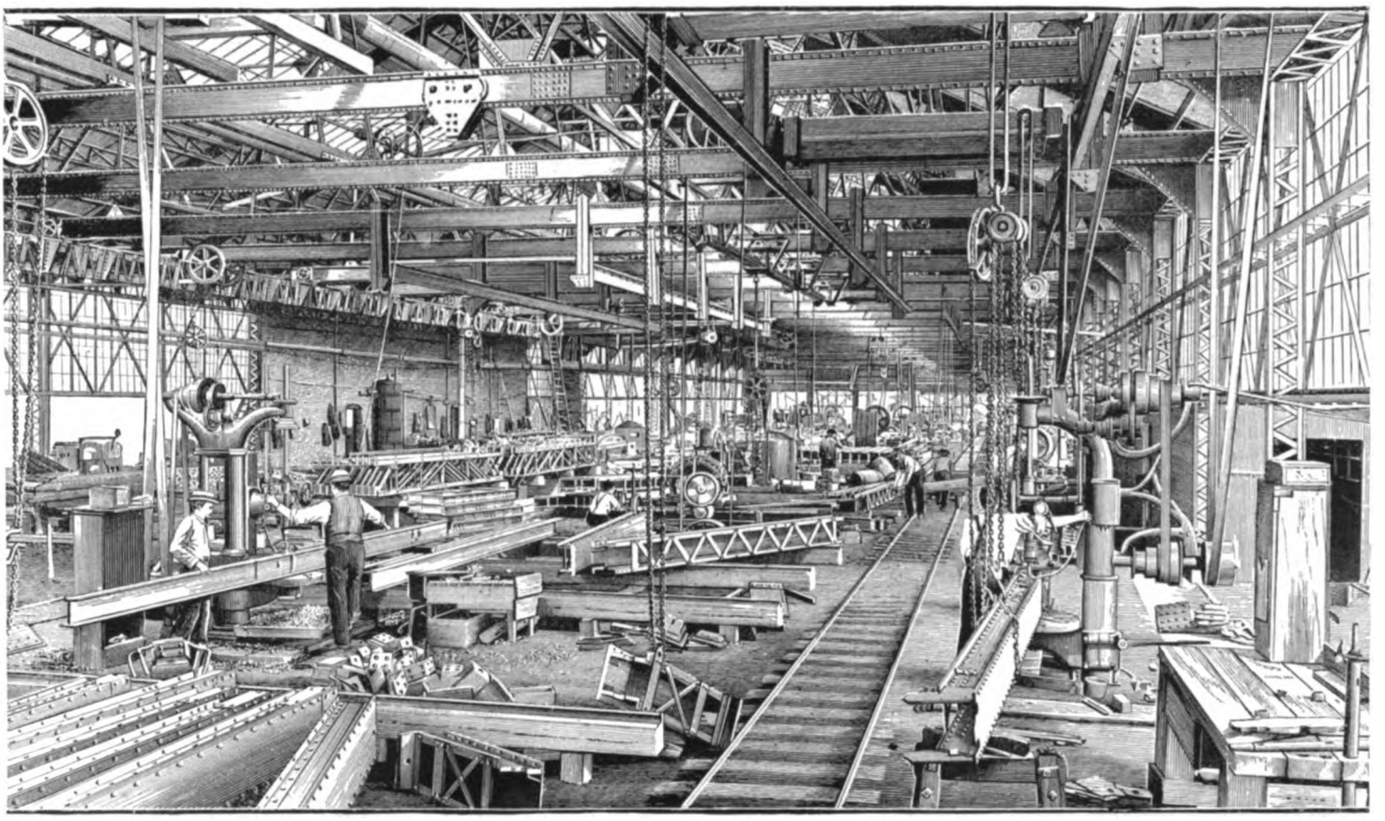
Plant of the Berlin Iron Bridge Co.

No company in this country has had a larger experience in the designing and construction of manufacturing plants than the Berlin Iron Bridge Co. of East Berlin, Conn. We therefore present to our readers in this this issue a description of the plant which they have lately built at East Berlin, Conn., for their own work, which is probably the best designed and equipped for all kinds of structural iron work of any plant to be found in this country.

The old plant of this company is situated on the west side of the Mattabesset River, and comprises about five acres of land well covered with buildings, which were originally designed for but a limited amount of product; and as the business of the company has extended from year to year additions have been made until the original buildings have sunk into insignificance, and the additions comprise the greater portion of the works. Owing to the limited amount of land available the company decided to build their new plant on the east side of the Mattabessett River in the town of Cromwell, connected with the old plant by an iron bridge of sufficient capacity to carry not only the narrow gauge cars which move their material about the premises, but also an ordinary standard gauge locomotive and loaded cars.

The interior of the company's new plant is shown. The works cover about three acres of land along the line of the New York, New Haven & Hartford railroad. The main building is 400 × 80 ft., constructed entirely of brick, iron and glass.

The sides of the building are of glass for a distance of ten feet from the eaves, and below that are constructed of iron sliding doors so arranged that they can be opened and closed quickly in order to allow the material to enter through the sides when necessary, and in summer they can be removed entirely, thus materially adding to the comfort of the employes.



INTERIOR VIEW OF THE BERLIN IRON BRIDGE COMPANY'S SHOPS.

The roof trusses are of iron, each designed to carry 10,000 lbs. at any point along the line of the lower chord.

The whole plant is connected together by standard gauge tracks which extend the whole length of the plant. On each side and at the front of the building, from which the finished product is discharged there are other spur tracks of standard gauge, one of which enters for a distance of 120 ft. so as to admit of iron being loaded inside during wet weather. All tracks are controlled at the front of the building by two jib cranes so arranged as to work from a four drum Mundy hoisting engine, so that one man can operate both cranes at the same time. The loading facilities are of such a nature that ten cars can be loaded in an ordinary day of ten hours.

The building itself is served by three lines of narrow gauge tracks, one on each side and one through the centre, connected at each end of the building by transfer tables which connect these tracks with the tracks in the yard. The raw material is distributed on each side of the main building direct from the cars and after being sorted, is moved over the narrow gauge tracks into the north end of the shop, the end shown on the left of the above illustration, where it is laid out from templates, trimmed at the shears and prepared for the punches.

The plant is lighted by means of a Thomson-Houston

dynamo with 250 incandescent lamps and twelve arc lamps all on the same circuit, the arc lamps to light the yard and the shop, with two incandescent lamps at each machine.

The whole plant is constructed exclusively of iron, so that there is absolutely no risk from fire, and the company are not obliged to carry any insurance as there is nothing about the building which can take fire and burn. This fact reduces the cost of maintenance to painting only, so that here we have a plant which seems to combine all the requisites of improved shop practice and for handling all classes of structural work with the least possible outlay of labor. In a construction of this kind the cost of maintenance, repairs, insurance, etc., seems to be reduced to an absolute minimum.

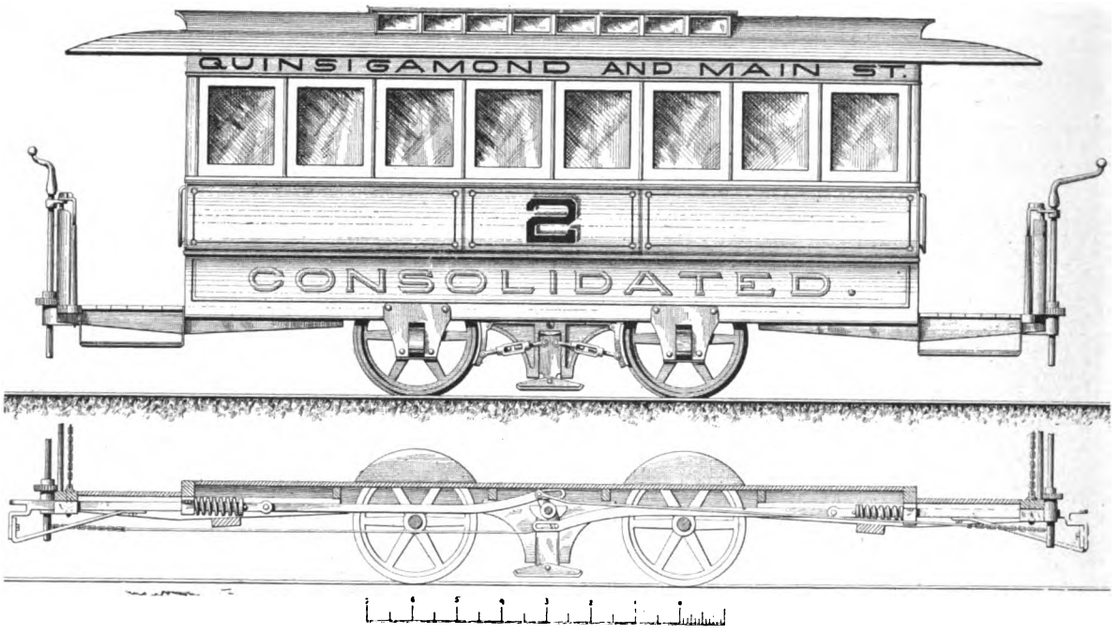


FIG. 1.—WOOD COMBINATION BRAKE.

Combination Track and Wheel Brake.

The accompanying engravings illustrate a new, simple, and apparently efficient method for operating wheel brakes in connection with the track brake, and designed for use both on cars propelled by animal and mechanical power..

Fig. 1 illustrates the method of operating the brake on horse cars, a single track brake being hung between the wheels and operated by the ordinary brake rod or from an extension of the drawbar. The operating mechanism, as will be seen, consists of a horizontal rocker shaft located crossways beneath the centre of the car, having radial arms which are connected both with the drawbar and the brake rod, the latter being operated in the ordinary manner from either end of the car. This horizontal shaft terminates in cams located directly over, and in sliding contact with, a vertical block which is arranged to slide in ways supported by the frame work of the truck. This sliding block terminates in a shoe pivotally attached and held just above the track rail. To the outer surface of the sliding block are two arms provided with turnbuckles and pivotally attached at one end to the block, and at the other to the lower outer surface of the wheel brake shoe, the latter being suspended from a pivotal connection with the truck frame. By the motion of the drawbar or brake rod the rocker shaft will be moved, and by means of the cams will force the sliding block downward, which motion will apply the brake shoe to the track, and at the same time the brake to the wheels, the harmonious action between the two being adjusted by means of the turnbuckles. A spiral spring is interposed between the vertical sliding block and the framework which automatically releases the shoes when the car moves forward.

Fig. 2 illustrates the method of attaching the device to electric cars, and in this case two sets of track brakes are employed and operated from two horizontal shafts and from the brake rod, in about the same manner as above described.

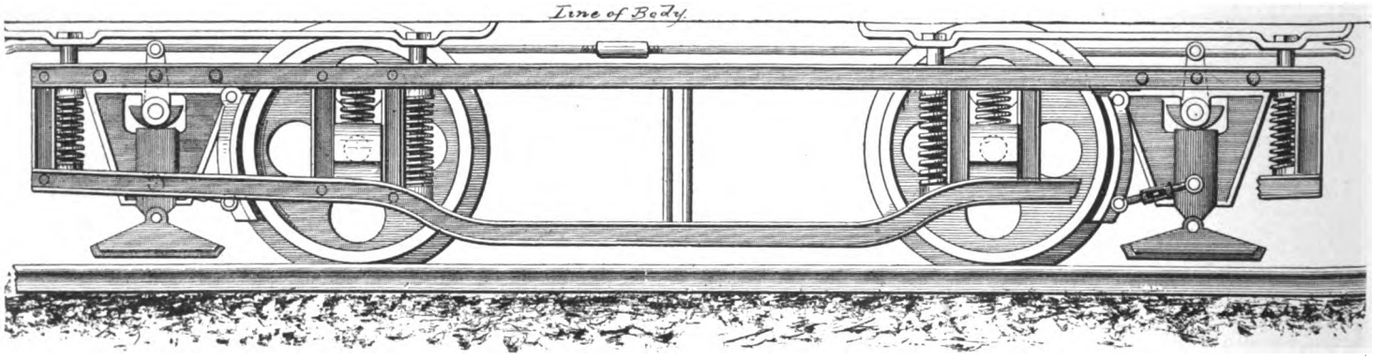


FIG. 2.—WOOD COMBINATION BRAKE FOR ELECTRIC CARS.

It is claimed that this device, besides being simple in construction, is efficient and reliable in its operation and not liable to get out of order. The track shoe may be constructed of any material best suited for the needs of the service. The device, we understand, is about to be put in practical operation on a number of cars, and its operation will be watched with a great deal of interest. The claim is made for it that it will hold a car of any weight on any grade up to twenty per cent. The device is the invention of Dr. R. O. Wood, of Worcester, Mass., from whom and from Mr. W. Martin Jones, of Rochester, N. Y., further particulars may be obtained.