

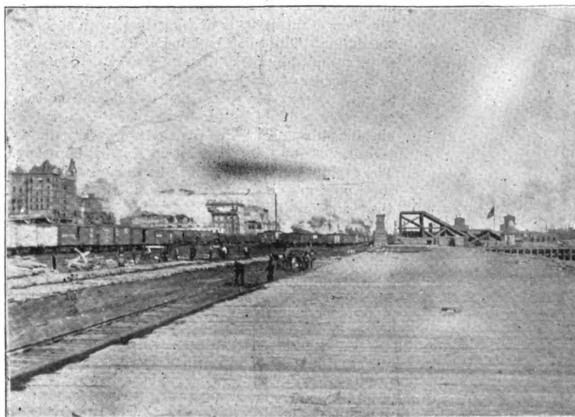
They are simply experimental heads, and it may be the same on the Northwestern and the Milwaukee.

It seems to me if the attempt has been made by the car builders to get up a wheel and wheel gage which are safe to run on a 4 ft. 8½ in. and 4 ft. 9 in. track, that the engineering department would be justified in experimenting with any gage, so long as they did not exceed the 4 ft. 8½ in. and 4 ft. 9 in. I do not know that there are any representatives of the engineering department here ready to justify their course, but I should imagine that that would be one of their lines of defense for the variations which have been shown here. Nothing has been said so far about the maximum thickness for flanges. That was one of the special features of the paper which was read at the last meeting, and it was made a special feature because I believe that it is a matter which is entirely ignored. We have found, as I stated in the paper, with a wheel pattern and a given

have been made by members this afternoon, and the editorial written in the RAILWAY REVIEW, enough points have been brought out to show that there is a very satisfactory reason for many of the derailments that occur on our various railroads, for which the causes seem at the time to be mysterious. It seems to me that it has been clearly shown that there are a large number of cars and engines running over the country that do not have wheels pressed on in such a way as to run safely on the rails, frogs, and tracks as we have them, and I think those of us who are representing railway companies ought to feel it our duty to push this matter through and try, to the best of our ability, to bring about a better condition. One of the points that we could make would be, as a club, to recommend to the executive committee of the M.C.B. Association and Master Mechanics that a joint committee should be appointed to consider the matter of wheel flanges and their

PROGRESS OF THE ELEVATION OF THE TRACKS OF THE ILLINOIS CENTRAL RAILWAY.

When it was decided that the World's Columbian Exposition was to be held in Jackson park, one of the serious problems that at once presented itself was the proper treatment of the tracks of the Illinois Central Railway which were just west of Jackson park, making it necessary to cross them in order to reach the exposition. It was soon determined that grade crossings were impracticable and as a solution it was finally decided to elevate the tracks and depress the streets sufficiently to give ample headroom for travel underneath. To those who are not acquainted with the enormous amount of



ILLINOIS CENTRAL RAILROAD TRACK IMPROVEMENT—FIG. 1.

thickness of flange, that there will be a considerable variation in the product due to carelessness on the part of the moulders. One of the objects of that paper was to show the importance of a maximum rule in regard to flanges.

Now within the last few weeks when the railroads have been frozen up solid, I think that every one has been, more or less, troubled with broken wheels; not necessarily broken in two or three pieces and causing a wreck, but the precursor of that condition; that is to say, broken flanges, chipped rims, etc. In the summer when the roadbed is not frozen up solid, as the rolling stock goes over our frogs and cross-overs and takes the shock from the guard rails, the wheel gets a kind of spring which is perhaps the reason we do not hear more of it, but when the roadbed is frozen solid and there is no give in the frogs and crossovers, then you get sledge hammer blows and the condition of things which has been on most roads the last few weeks. I believe it

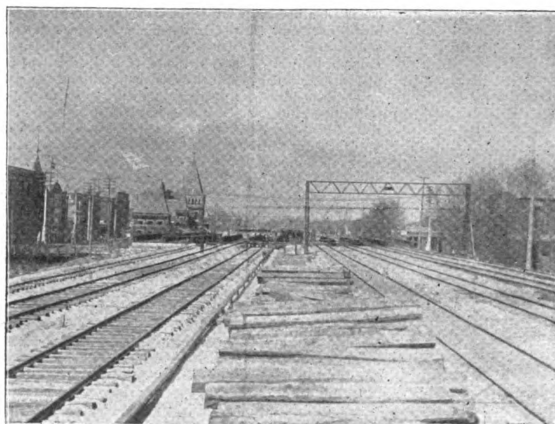
relation to track, the matter of a maximum gage for flanges, and of the proper track gages to work properly with the standard wheels that have been adopted, and that the whole matter be reported upon at the meeting following the next one. The work of such a committee would be of lasting benefit to the railroads of the country, and the mechanical departments of the railroads would thereby be enabled to put the whole matter before the American Railway Association, representing the managers, and thereby bring the matter in such shape that both departments could be considered. A result might in this way be brought about which would materially reduce the number of derailments, improve the track, and reduce the number of wheels that are removed an account of sharp flanges, many of which no doubt occur on account of the wrong relation between the wheels and the track.

Mr. Rhodes—Mr. Chairman, I move that a committee be



ILLINOIS CENTRAL RAILROAD TRACK IMPROVEMENT—FIG. 3.

traffic daily passing over these track, and the number of tracks which are necessary to accommodate this traffic, this seems like a small matter. It looked like a very serious one, however, to the railroad company, and it is only necessary to take a trip over the elevated section in order to appreciate the difficulties attending the change. The work is progressing rapidly and will without doubt be completed in time for the fair. In addition to the elevation of the tracks that portion between Jackson park and the city is being rearranged and additional tracks put in, a complete system of automatic signals is being installed, a description of which will be found in the RAILWAY REVIEW of Jan. 28, 1893, and in addition to this work a new depot is being built at Twelfth street.



ILLINOIS CENTRAL RAILROAD TRACK IMPROVEMENT—FIG. 2.

would surprise more people, and probably most managers of railroads, if they knew how many of their wheels have broken in the last few weeks. I think it is clear that the greater the variation we allow between the track and wheel gage, the more severe will these blows be, and I believe that what has been shown will make those who are responsible for both the condition of wheel gage and track gage give more and clearer attention to this matter hereafter. Undoubtedly, if the track gage was all uniform, the blows on our wheel rims, etc., would be very much less severe than when they are badly out, as is indicated in this paper they can be, and in Mr. Street's paper particularly. If any here have not caused reports of broken wheels to go to their officers, I would advise them very strongly to make inquiry into the matter and see the condition of things.

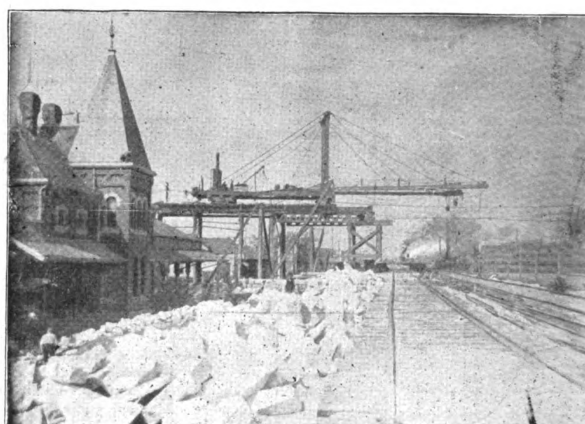
Mr. Waitt—It seems to me that this question is one that ought not to be allowed to drop with the simple discussion of it. In the paper that has been read, in the remarks that

appointed, such as you have outlined, to lay this matter before the executive committee of the M. C. B. Association, with a view of having joint action taken with the superintendents.

Chairman Waitt—The idea is that a joint committee should be appointed from the two associations to work together. It seems to me our secretary, if he were instructed to communicate with the secretaries of the two associations, might bring it about, if such a motion would meet your approval.

Do I understand you to make a motion that the secretary communicate our recommendation to the two associations? Mr. Rhodes—Yes, sir. The motion was adopted.

It is stated that the Des Moines shops of the Chicago Great Western will be removed to Oelwein.



ILLINOIS CENTRAL RAILROAD TRACK IMPROVEMENT—FIG. 4.

In going from the city south the first work of importance is at Van Buren street where a viaduct is being erected across the tracks to allow passengers who wish to take the through trains or boats to Jackson park to reach either without crossing the tracks at grade. The illustration herewith (Fig. 1), shows the present appearance of this work looking north. The tracks to be used exclusively for world's fair traffic are being built east of all the other tracks and the photograph from which Fig. 1, was reproduced was taken from an elevated platform from which passengers will pass in and out of the cars used in this service. The workmen in the foreground are laying the world's fair tracks, and in the distance the piers can be seen on which the bridge over the tracks will rest. The next work of importance is the new depot at

Twelfth street. Work is progressing rapidly on this building and it is expected in a subsequent issue to give some illustrations showing it as it now appears. At the old shops just beyond this depot, the arrangement of tracks has been entirely changed, portions of the old round house and shops being demolished to give the additional room necessary. This work is practically complete with the exception of attaching the interlocking.

At Sixteenth street the old depot is being entirely overhauled and remodeled. From this point to Thirty-first street seven tracks will be used, which are all complete. At Thirty-first street a new waiting room has been built. From this point to Thirty-ninth street six tracks are completed and in use, while the ties are distributed for the seventh, which is rapidly nearing completion. From Thirty-ninth to Forty-third streets the seven tracks are finished. From Forty-third to Sixtieth there will be eight regular tracks beside switches, sidings, etc. From Forty-third to Forty-seventh these tracks are completed, and at Forty-seventh the elevated section begins, the grade extending to Fifty-first street where the level of the elevated portion is reached and the first viaduct located. This viaduct will accommodate nine tracks, seven of which are completed. From this point to Fifty-third street the filling is practically completed for eight tracks. At Fifty-third street the viaduct will accommodate 10 tracks, and is complete with the exception of the floor for three. From Fifty-third to Fifty-fifth street eight tracks are practically complete. The viaduct over Fifty-fifth street will accommodate 10 tracks, and is complete with the exception of the floors for three of them. The next viaduct is at Fifty-sixth street, which is the north line of Jackson park.

Fig. 4, shows the manner in which the work is being erected, and the general appearance of the Illinois Central tracks. The next viaduct is at Sixty-fifth street, at which point six tracks are in service and the foundations in for the remainder of the viaduct. At Sixty-seventh street the next viaduct is located, and when complete will accommodate eight tracks, six of which are finished and in service. From this point the grade of the tracks is gradually depressed, and the old level reached at a short distance beyond the intersection with the South Chicago branch. The switches, frogs and crossings are all in for this branch, the interlocking tower is completed, and it only remains to connect the two to have the work ready for service. The unusually bad weather of the winter has been very much against rapid work, and the progress made is remarkable, particularly in view of the enormous traffic which has been handled without serious interruption.

THE LOCKWOOD STATE ROOM SLEEPING CAR

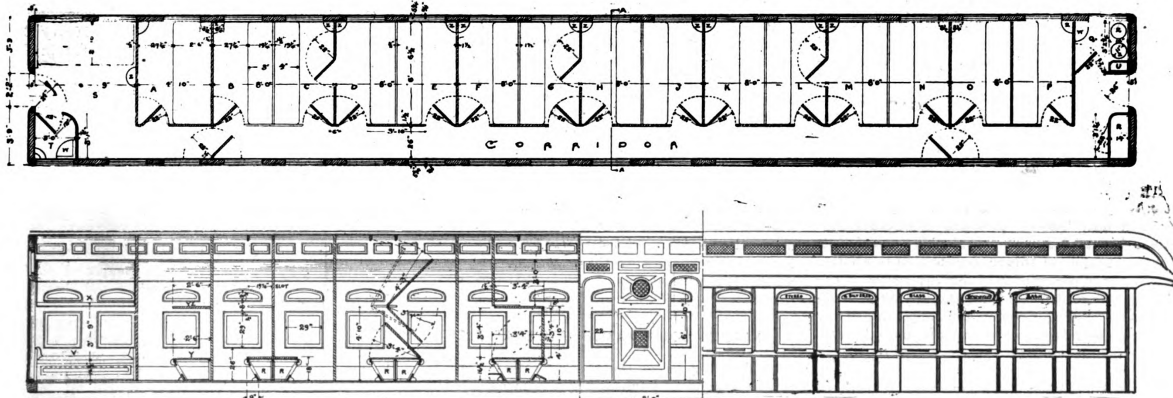
The demand for sleeping cars has been gradually increasing ever since their introduction, so that in addition to the two large companies operating such equipment other companies have come into existence, while some of the railroad companies own and operate their own. As a result, practically all of the important roads of the country are completely equipped with first-class sleeping accommodations which may be obtained at a small cost. Improvements have gradually been made in the construction and convenience of arrangement in these cars until it would seem that perfection has been very nearly reached. There are many railway men and designers

provided for storing the bedding are also indicated in the cross-section by the letter *R*. The other end of the car is provided with a gentlemen's smoking room *S*, gentlemen's closet *T*, wash bowl *Z*, and an upper and lower Pullman type of berth. If each berth is occupied by two persons the car will carry thirty-two passengers. It will be noticed that these berths are two inches wider than a Pullman berth, and two persons traveling together can easily sleep in one berth.

It is claimed that a car built on this design will have many advantages over any others in use. One of these is the absolute privacy given to passengers, during both day and night. When the use of one berth is purchased it means that the purchaser is to have the exclusive use of a state room, and as each of these rooms is fitted with toilet arrangements, the morning toilet can be completed in absolute privacy. If the passenger wishes to lie down during the day a large and comfortable lounge is at hand. At night the door of the state room may be locked and any valuables in possession of the occupant will be perfectly safe.

Each passenger can ventilate his apartment to suit his own ideas without interfering with the comfort of others. There is no necessity for berth curtains, which it is claimed interfere with the ventilation of the majority of sleeping cars. The berths when made up can be as well lighted as any other portion of the car.

Mr. Lockwood has a half size model of one of these cars on exhibition in Cincinnati, and arrangements are being made to have a complete car built at an early date which he hopes to exhibit at the world's fair. Mr. Lockwood, who is connected with the



LOCKWOOD'S STATE ROOM SLEEPING CAR.

At this point the viaduct for 10 tracks is complete with the exception of the floors for two tracks and the rail for four. The filling is practically complete for eight tracks. The next viaduct is at Fifty-seventh street and will also accommodate 10 tracks, eight of which are complete. In the illustrations herewith, Fig. 2 is a reproduction from a photograph taken from a point just south of this viaduct, showing the general appearance of the work at this point. From Fifty-seventh to Fifty-ninth street the filling is practically complete for seven tracks, and the viaduct at Fifty-ninth is finished for six tracks.

Fifty-ninth street is the north boundary of the Midway Plaisance, and from this point to Sixtieth street, its southern boundary, the tracks are all carried on piles. This will be the point at which passengers will be unloaded for the world's fair, and including siding, there will be twelve or fourteen tracks. An enormous amount of switching must necessarily be done at this point and it will be one of the busiest on the line. Platforms and stairways are being arranged throughout the entire length of the trestle work, so that passengers can readily pass from the cars to the ground and to the main entrance to Jackson park. In the illustration herewith Fig. 3 is a reproduction from a photograph, taken at Sixtieth street, looking north, and shows the general appearance of the pile work. From Sixtieth to Sixty-third street the filling is practically completed for eight tracks. At Sixty-second street a brick archway is built beneath the track for the use of foot passengers, and at Sixty-third another viaduct is built, which will accommodate eight or nine tracks, six of which are complete and in regular service. At this point the tracks of the South Side Elevated Railroad will cross above those of the Illinois Central, and the illustration herewith,

however, who think there is yet room for improvement and are working on designs which they expect will be superior to any of those already in service. One such is Mr. C. L. Lockwood, of Cincinnati, Ohio, and the illustration herewith, which embodies a general plan, part longitudinal section, part side view, and part section through corridor, shows the general design of the car of his invention.

The car is arranged with a corridor running the entire length on one side, and opening off this corridor are fifteen state rooms. During the day when the car is not being utilized for sleeping purposes, each of the state rooms contains a sofa 6 ft. 6½ in. long, and 19½ in. wide. This includes only sections *B* to *R*, inclusive, as shown in the drawing, section *A* having seats 30 in. wide. When it is desired to make up the sleeping berths the partitions are rearranged to bring an upper and lower berth in each alternate state room and make each bed 6 ft. 6½ in. long and 3 ft. 4 in. wide. The manner of making this change can be understood by referring to the half longitudinal section in the illustration. The upper half of the partition is moved forward a distance of 19½ in., the lower half swung up into a horizontal position, and an additional partition which forms the top of the seat thrown up into a perpendicular position. This brings the upper berth in one state room and the lower berth in another, as shown. It is necessary to have only one-half of the partitions arranged in this manner. The others are provided with doors which enable the throwing together of two rooms when a large apartment is desired. The end section of the car *A* is equipped with a single upper and lower berth. One end of the car is provided with a ladies' toilet room *Q*, and locker *R*. The lockers beneath the seats

Wells, Fargo Express Co., or J. W. and G. A. Shrague, the Express Gazette, Cincinnati, O., will be glad to give any desired information concerning his new car.

New York Railroad Club.

The New York Railroad Club requests, through its regularly appointed committee, that members will forward not later than April 7, 1893, any suggestions they may have toward modifying or making additions to the "Code of Rules Governing the Conditions of, and Repairs to, Freight Cars for the Interchange of Traffic."

All suggestions and recommendations will be discussed at the next regular meeting of the club, which will be held April 20, 1893; the recommendation of the club to be forwarded to the secretary of the Master Car Builders' Association for discussion before the arbitration committee at their next and last meeting before the annual convention.

Should any member desire a rule changed or modified, the exact wording of the new or modified rule should be given, as well as a full explanation of why the change is desired, so that the committee may have full data upon the subject.

Replies should be addressed to A. E. Mitchell, superintendent motive power, N. Y., L. E. & W. R. Co., 21 Cortlandt street, New York.

How It Works.—It is curious how many there are, who fail utterly to comprehend the principle upon which hydraulic machinery is operated. We've seen men using presses for years, to whom the rationale was a sealed book, and to whom our Irish friend's explanation was lucid and satisfactory. Mike was using a hydraulic jack to lift a car off the trucks, when a friend happened along, and quoth he, "Be jabbers that's a foin' thing ye do bees havin' there, Molke, and phwat's in ut?" "Ah, wather, or whisky or some other dom thing." "But phwat lifts the kyar?" "Well, yez see, Ol wurruk this handle up and down alsy. Mike, an in the inside there's a bit a v'a pump, and this pump it do send the wather beneath the ram that comes up against the kyar, an the wate ye the kyar on the ram makes a big pressure on the wather beneath, and that lifts ut up, an all Ol have to do is to pump the wather beneath the ram to kape it full."