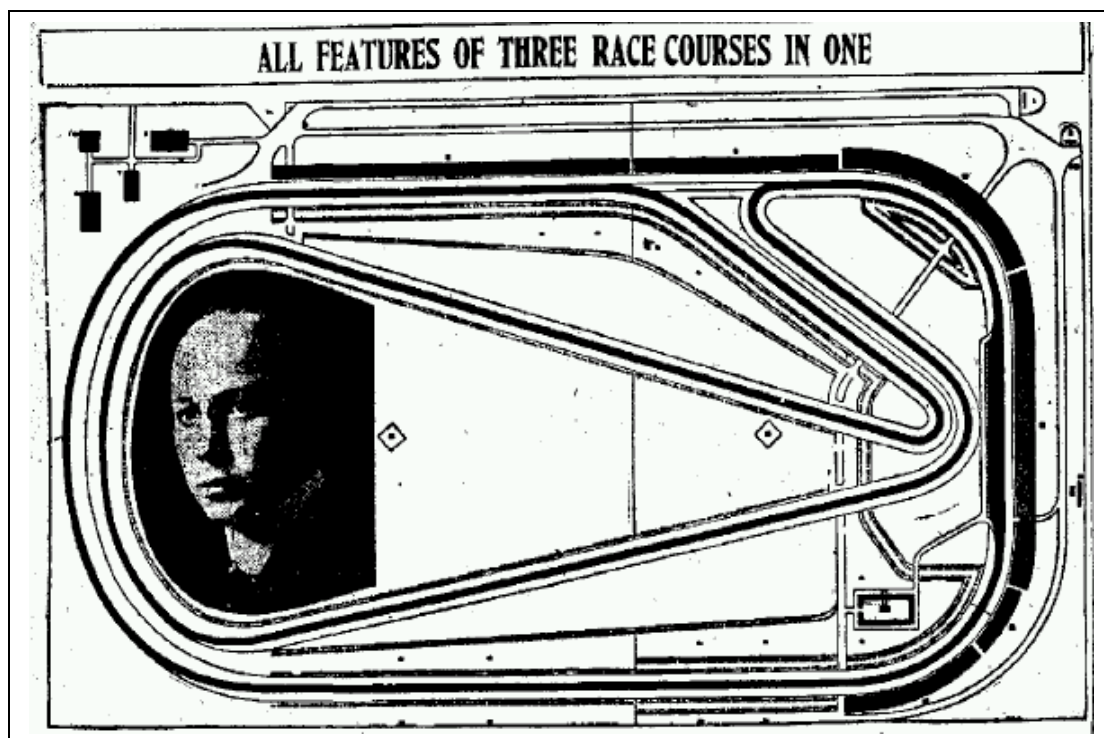


The Wellman Track



The Wellman Track was the brainchild of Fred Wellman in 1915, who had by that time been director for publicity and assistant business manager of the Indianapolis Motor Speedway for two years. The aim was to combine the advantages of a speedway, road and dirt track in one location without their defects, and to make sure that all of the track was visible from the grandstands. It predated the Indianapolis Motor Speedway Grand Prix course by some 84 years. Wellman issued the following statement describing the course:

“The Wellman Raceway consists, broadly, of an outer track of two miles combined with an inner loop of slightly inferior length through a series of short straightaways and sharp curves centering directly in one end of the track adjacent a short straightaway, along which are located the pits. The curves in the outer track and inner loop at the far end of the raceway are long and parabolic, banked to an angle of 45 degrees so that in conjunction with the long straightaways which lead in and out of them, they make the accelerative attainment of 140 miles an hour easily possible. The curves in the outer track leading to and from the short straightaway which holds the pits are of lesser diameter, and flat and shallow, being banked to an angle of only 10 degrees. These can be negotiated at high speed only by the most violent exercise of strong arm tactics, allowing a car to slide and then jerking it back again. The curves terminating the short intermediary straightaways which connect the outer track and inner loop are extremely sharp and perfectly flat, making the use of the spectacular hairpin skid absolutely imperative. The additional spectacle of the leap is supplied by inclines, suitably placed in the straightaways, wherever the achievement of maximum spectacular effect is desired.

The entire layout is such as to call into play, one after another, all the sensational features of which the automobile racing game is capable. Speed, slide, skid and leap, all are there, blended into a spectacle of infinite variety. Most important of all, however, for otherwise the entire effort would be wasted, these features are so grouped that they are visible, in their entirety, from an unbroken grand stand frontage of no less than half a mile, and visible in part from an abutting grand stand frontage of half a mile or more. This makes a continuous first class grand stand frontage of one mile, the longest in the world. On top of this, the interior arrangement of the raceway is such that a major portion of this grand stand frontage is passed by every car no less than three times to the conventional race track's one. The three-ring circus is a fitting analogy to this achievement.

A great additional advantage incident to large available grand stand frontage is that it renders possible the use of long, narrow grand stands of comparatively inexpensive construction with a maximum seating capacity close to the track. This is a feature impossible of attainment with satisfaction on any of

the present day race courses, none of which has much of interest happening outside of the pits, once the race is on, and which, consequently, are restricted in first class grand stand space to this narrow area.

All of the advantages enumerated, of course, would avail a track nothing, if that track were dangerous to human life. Human life, as the means of profit, is too dear at any price. For this reason, while working out the spectacular features of my raceway, I at the same time deliberated on a method that would safeguard the lives of drivers, no matter how wild or reckless their exploits. In this I was finally successful, applying the age old principle of preventing accident by removing its cause.

A close first hand analysis of accidents both on the Indianapolis speedway and elsewhere had taught me that when a driver met his fate it was due to only one reason – he left the course. As long as he was on the track, with plenty of room to slide in, and nothing to obstruct his progress, he was out of danger.

What more simple then, as a means of accident prevention, than to build a track of ample width, and force the driver to keep out of danger by holding him in the center of it, away from the fatal edges. Then, if anything happens, he is safe. The room at the sides enables him to regain control of his car before he hits anything and, after a bit of spectacular work with the wheel, he is again on his way. Of paramount importance, of course, is the matter of holding a driver to the center of the track. Without this, even the widest track would be worthless, as drivers, to make speed, will cut the corners – steering too close to the edges – outside on the straightaways, and inside on the turns – for safety.

The result of these deductions is the Wellman method of track construction, which specifies a course of minimum width of 100 feet, subdivided into a concrete roadway 30 feet wide in the center, and slideways of turf 36 feet wide on each side. The use of turf is made possible, in this connection, through a safety rim of my invention – a rim with a light, curved, though tremendously strong outer flange which, when the tire is off, presents the same identical surface toward a skid as the tire itself. And a tire slides on grass to perfection.

With this method of track construction, drivers are automatically forced to keep to the center of the course – there is no place else for them to drive if anything happens, they have at least 40 or 45 feet of elbow room in which to regain control, enough for even the most unskilled of the lot.

An exception is made to this construction in the turns at the far end of the raceway, which carry the concrete driveways along their outer edge. Here the track is so steeply banked that skidding is practically impossible, save to the inside, where slideways are provided of double width, because of the extreme speeds developed in that quarter.

The detailed specifications of the track, with reference to surface dimensions and material, were furnished by Ralph De Palma, one of the world's most experienced and analytical drivers. De Palma not only stated that 30 feet was ample for the concrete driveway, but that 36 feet of turf on each side would furnish all the leeway that would ever be required. Turf, moreover, said De Palma, would stand up perfectly under any of the strains to which it might be subjected.

A tremendous advantage of this method of track construction is its low cost. By cutting the hard surface of the track down to 30 feet, and making that of concrete, the 4.1 miles of the Wellman raceway can be built for the same or less money, including every item, than a two or two and a half mile speedway of the present type. A big saving is in the elimination of safety walls alone, which, through the use of slideways are made unnecessary, save on the outside of banked turns, where they are installed as an extra precaution. On the ordinary race course, safety walls are not only an additional expense, but an actual source of danger, drivers travelling so close to them that, in the event of a skid, they have no time to straighten up, but hit them at a sharp angle. As a result they turn over. The Wellman way, if they hit the walls at all the drivers will have their cars under sufficient control to go into them gradually, and slide along to safety.

The specification of concrete for the driveways and safety walls of the track hardly needs an explanation. The low cost and durability of this material, as compared with others available, makes it the inevitable choice of anyone who is not only building for a day but for years to come. And the Wellman raceway will last as long as the automobile itself.

In its many other details, of which there are legion, I have brought to bear my whole experience of two years as assistant business manager of the Indianapolis Motor Speedway. Familiar with every advantage of this track, as well as its defects, from an intimate point of view, I have designed a

speedway that will meet every modern requirement, from the point of view of comfort, convenience and ocular enjoyment of the spectator.

To begin with, I have freed the infield of sight arresting obstructions as much as possible. The familiar obstacles, such as the judges' stand, hospital, garage and scoreboards, have either been transferred to the outside of the track, moved to one side, or shoved back into the perspective so as to cut off but very little of the horizon. In addition, the grand stands have been so located that every possible advantage of the track contour is utilized. The turns have been taken into especial account, as there is a much wider angle of vision from these locations than the straightaways, though seats along the short straightaway on this track, adjacent to the pits, are exceptionally good, inasmuch as the general layout of the track is such as to throw every part of it within their range of vision.

The press and judges' stand has been located on the outside of the track, on a turn, instead of in its usual position. This enables officials and newspaper men to command a full view of the course at all times, without the necessity of getting up or turning their heads – an incalculable advantage, especially to newspaper men, who otherwise must depend of scanty bulletins for information as to what is going on, and cannot write nearly as good a story as if they actually saw what was happening. The new location of the press stand, moreover, does not interfere with the view from anyplace else.

The press stand, over all, has been designed to accommodate not only working newspaper representatives, but all other guests of the management as well. This segregation of holders of complimentary tickets will be found a great convenience, both in issuing passes and checking receipts. The interior of the press and judges' stand, in itself novel, need not be discussed here.

In back of all the stands sufficient parking space has been provided to take care of every demand. The arrangement and distribution of this parking space, moreover, is such that holders of grand stand seats, in a majority of instances, can park directly in back of such seats, an item of great convenience, especially to women. Items like these may not look important to this casual observer, but they count heavily in building up a satisfied patronage.

The field parking spaces, reserved and free, are more than four times as ample as those of any track now built. Moreover, they are so arranged as not to interfere, except incidentally, with the view from the grand stands, their location having been charted with reference to the sightlines from the lowest row of grand stand seats. The parking space along the outer edge of the straightaway of the inner loop, for instance, has been bent back until there is barely enough room between it and the parking space along the inside of the straightaway in the outer track for toilets, which must of necessity, have a certain amount of clear space to themselves. This arrangement not only operates for the benefit of the grand stands, but for the parking space in question, as well, the angle of vision from this location being materially widened, action on the inner curve at the far end of the track is clearly visible to everyone, despite adjacent parking space, inasmuch as this turn is banked 30 feet, and the cars file along its outer edge, high in air, above the machines alongside.

Gates and roadways have been designed so that though there are but two main gates (the fewer the better both from a traffic and supervisory point of view), they will handle 100,000 people, half of them in automobiles, in one hour and forty minutes, with room for 50 per cent over-capacity. Wide places are provided both inside and outside the entrance gates, in which machines may freely maneuver to gain their respective roadways, without blocking traffic. The roadways all carry traffic one way only, eliminating cross-currents with their inevitable confusion, and terminate, moreover, directly at the gates, so that each road has to handle only its particular class of traffic.

Access to the infield is had by means of two tunnel roadways, terminating directly at the gates, which lead consecutively to each of the interior parking spaces. Entrances and exits to these roadways within the parking spaces are so arranged that machines may be split off from the main line of traffic where it emerges from under the track, to the right and left, without checking the progress of following cars in the least, enabling traffic to flow freely and swiftly. Switching of cars back and forth across the main line of traffic within the parking spaces is accomplished by a bypass, which bridges the main line where it drops underneath the track again.

The hospital and garage of the raceway present an arrangement that is extremely novel, the garage being built in the form of a quadrangle, with the hospital in the center. In this manner the hospital, through provided with an unusually ample courtyard, a very desirable item, in the event of a crowd stamped, or some such major accident, is yet totally concealed from view. In this manner, also, the

hospital and garage are made to occupy practically the same room occupied by the former alone, a distinct advantage from a sight line point of view. The location of garage and hospital is most convenient for both, giving easy and natural access to the pits, and quick entry to the tunnel roadways which short out to all parts of the grounds. At the same time but little view is cut off, the buildings being situated off to one side, with reference to the grand stands, and kept rather low, so that people can see over them. The contestants' roadway, to and from the garages, is absolutely private, as are all other signs of contestants' activity. In this way the public and drivers never come in contact, making police duty an easy matter.

Finally, the raceway is equipped with a scoreboard, which will increase interest in any contest, even a push-cart race. Present day scoreboards are all at fault in that they make numerical comparison and arithmetical calculation necessary to keep informed, and also that they seldom agree. People tire of figuring, particularly when they see it is for nothing. I have avoided this, first by using but two scoreboards, operated by watching a master scoreboard on top of the judges' stand, with which they must ever be in perfect agreement, and second, by making the scoreboards virtually picture the race, instead of merely affording scattered numerical data for comparison. The plan is an outgrowth of the Pendleton system of picturing the progress of a car while it is out of sight in a road race, only on a much larger scale.

In the scoreboard I have evolved, each car is given a sliding number which is moved a space, denoting a lap, every time the car crosses the tape. Each number moving in the same direction, there is literally a race between them, the result of which is apparent at a glance, without the necessity of further checking or calculation. In this manner the spectator is constantly keyed up to the race, and follows every detail of it from start to finish.

Announcements are made, not by megaphone, but by means of movable letters or a roller towel blackboard on top of the scoreboards which spell out the bulletins almost as fast as they can be written. There are very few happenings during a race that cannot be told in four or five words, such as 'No 4 out, broken camshaft,' and these can be handled with ease. At present, with megaphone announcing, the public is left entirely in the dark, as the noise of the cars makes it impossible to hear with satisfaction, and moreover, it is out of the question, on account of the expense, to try and announce to everyone.

Other appointments of the raceway, in which the public is not necessarily interested, such as office buildings, lodges, barns, barracks, storerooms, tool and supply houses, have been laid out with an exact knowledge of the various needs of the situation, and a rigorous eye to cost. Proper attention to all of these details is necessary to smooth management and an efficient organization – an organization that will keep a race course in trim and making money year after year.

In fine, I have endeavoured to design a track that will not be only for a day, but for years to come, or as long as the automobile is common use. Laying out a course on which the spectacle of strife between human beings, replete with sensations as no other sport can provide, is paramount, and furnishing this course with every appointment for the comfort, convenience and ocular enjoyment of the spectator."