

the town of Lake Charles and in the southwestern part of the State. Geographically, it is believed to form a portion of what is called the Gulf coast oil belt, which includes the Jennings petroleum field, also the Beaumont and other fields in eastern Texas.

A RAILROAD COACH CONSTRUCTED IN FORTY HOURS.

BY THE ENGLISH CORRESPONDENT OF THE SCIENTIFIC AMERICAN.

An interesting feat was recently performed at the Parel Works of the Great Indian Peninsula Railroad,

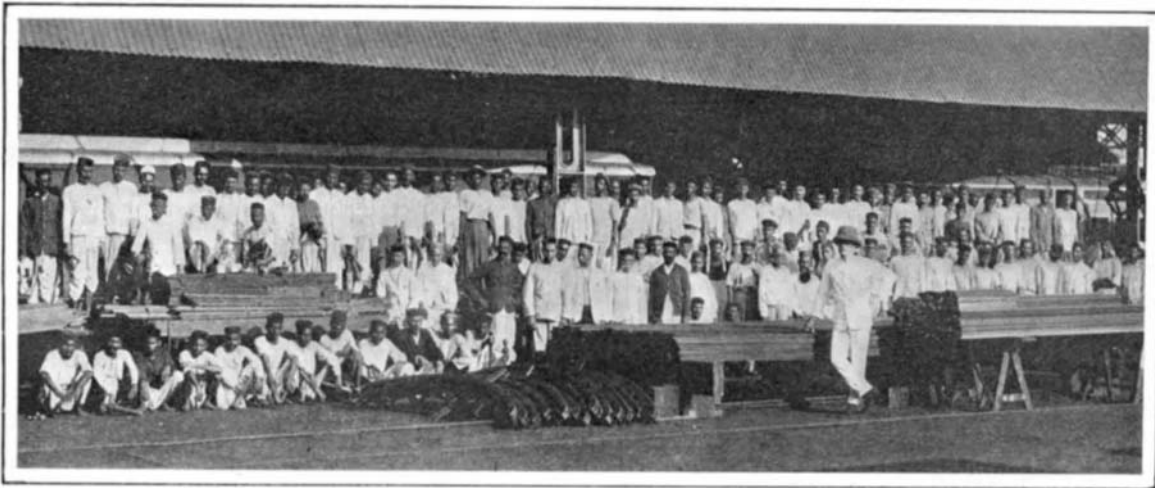


Fig. 1.—Men and Material Ready for the Start on Monday Morning at 8:30.

which in view of the peculiar conditions prevailing, and the fact that it was accomplished entirely by native labor, proverbially slow, is most remarkable. In the early part of this year the company required a special type of trailer coach, to be used with a small tank locomotive, at extremely short notice. Under the circumstances, it was decided to test the capacity of the works and the native laborers in regard to rapid construction.

Special drawings had to be prepared, and these were put in hand on March 1. As rapidly as possible the orders to prepare the material were assigned to the various departments, so that all material might be ready for assembling upon the same day. By the 26th of the month everything was in readiness, the consignments of the respective materials being delivered at the spot where the work of erection was to be carried out. The men, aggregating eighty-eight in number, under the direction of eight "maistries" and superintended by Mr. A. M. Bell, the carriage and wagon superintendent of the railroad, to whose courtesy we are indebted for the accompanying illustrations and details of the operation, were drawn up at 8:30 on the Monday morning, in the manner shown in the first illustration. Punctually at the half-hour they were set to work. The company were divided into various gangs, each of which carried out a particular operation. Some commenced work upon the bogie trucks and steel underframe, while others prepared the sides, ends, floors, and roof. By the time work finished for the day at 4:30 in the afternoon, considerable progress had been made.

It was decided to carry out the work without undue pressure, no overtime being permitted, the length of the working day being limited to eight hours, which ordinarily prevails in the works. The men recommenced work the following day at the same time in the morning, and maintained the excellent progress that had been established during the previous day. The underframe was sufficiently advanced for the superstructure, the end sections of which were quickly secured in position, while the floor gang at once entered and completed their work. During the afternoon the ribs for supporting the roof were fixed, and by the time work was discontinued for the day, the actual erection had been more than half completed.

When the task was resumed on Wednesday morning, the coach had reached the stage shown in our second photograph, which was taken immediately after starting. The underframe was completed and the roof laid. Of the total gang, sixty-six of the men were carpenters, and these now busily set to work preparing the doors, windows, seats, and other accessories, while nine upholsterers were simultaneously engaged upon the cushioning and trimmings for the seats, blinds, and so forth. In the afternoon all erecting work had been

completed, and when the men finished, the body had received its first priming coat of paint.

The next morning painting of the inside and outside of the coach was hurried forward. The outer covering for the roof was attached, and the carpenters and glaziers fixed the windows and doors, while the upholsterers proceeded with the seats and trimmings.

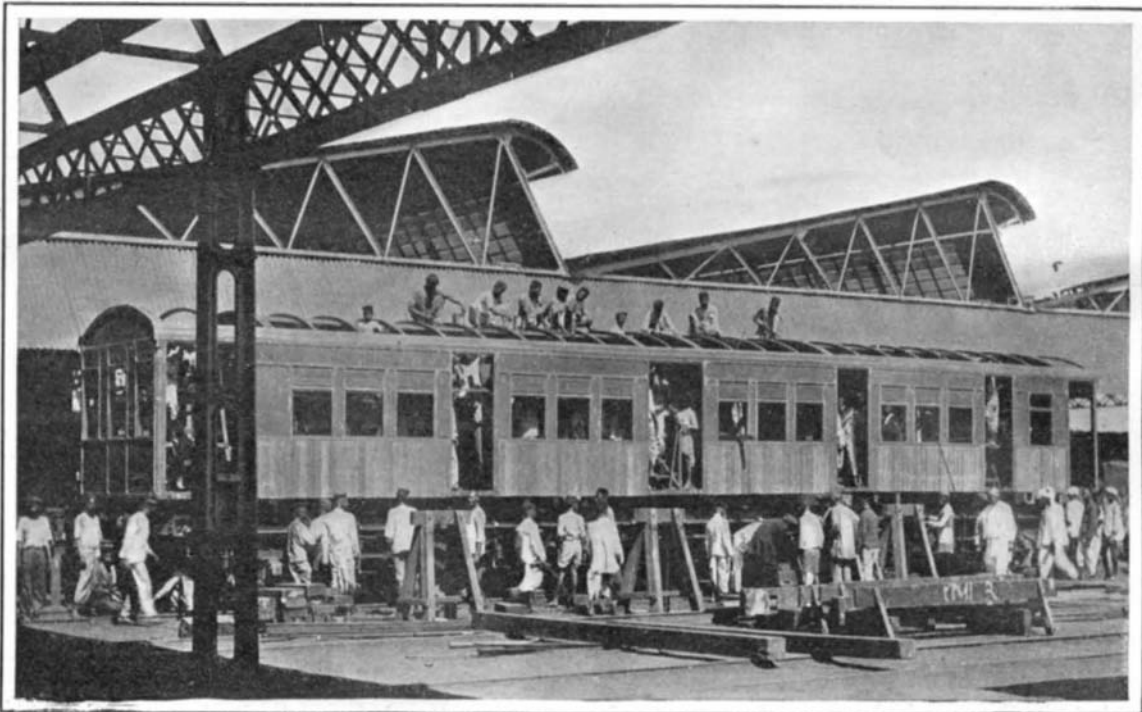


Fig. 2.—The Car on Wednesday Morning, at 8:30, After Sixteen Hours Work.

All the hard internal work was completed on this day, so that Friday could be devoted to carrying out the final finishing processes. On the latter day the final coats of paint and varnish were applied throughout, the electric light fittings installed, vacuum brake fitted, and various embellishments, such as door handles, hand rails, and the like, applied. The lettering was

also completed, so that at 4:30 in the afternoon, when the third photograph was taken, the task was ended, and the coach ready for the rail. The actual working time spent upon the undertaking was forty hours, from the moment when the men set to work on Monday morning.

In the construction of the carriage 600 feet of Australian timber was used, and all this had to be machined, planed, cut, and accurately fitted. The woodwork department had to make 19 doors, 92 windows, and 92 shutters, which had to be hung and fitted. The engineering staff had to erect all the steel underframe, the necessary material for which was simply delivered to the erecting point.

The car upon which this Indian record was established is of the typical local service variety. It measures 62 feet in length by 9 feet 6 inches wide. The steel underframe is 60 feet over all, and is carried upon two four-wheeled bogies placed 40 feet apart from center to center. The internal fittings are somewhat intricate, as the coach is of the composite type, there being the conductor's compartment at one end, followed by the first-class accommodation, capable of seating six passengers. Then follows a spacious third-class compartment seating forty-eight persons, with a small compartment for the accommodation of twelve females, who in accordance with the Hindoo custom travel separately.

Beyond this is a small space for the stowage of baggage. The car being intended for suburban work, running in either direction, the seats are of the turnover pattern.

The railroad authorities expressed themselves as highly satisfied with the efficiency of the staff, since the native is not apt to be hurried over his work. Fortunately, the men entered into the enterprise with commendable zeal, determined to establish a record for native labor. In such circumstances and under such conditions, it is difficult, even when a programme

of work is carefully drawn up, to adhere very rigidly to the details thereof, owing to the labor problem; but in this instance, owing to the organization of the European staff and their careful handling of the natives, the work was carried out without any difficulty. Had pressure been employed and overtime worked, the undertaking might have been completed in a much shorter time, but it was not deemed advisable to resort to such extreme measures in a torrid climate. At the same time, however, it demonstrated what can be accomplished with native labor when it is competently handled. On Saturday morning the coach was officially inspected, and no traces of scamping, such as might have been anticipated, were discovered, the work being carried out with as much care and thought as if undertaken in the normal manner.

Termination of the Glidden Tour.

As we go to press the last stage of the Glidden tour—124 miles from the Rangeley Lakes, Me., to Bretton Woods, N. H.—is being traversed. Fifty-eight cars are still in the tour, thirty-six being contestants for the Glidden Trophy, and fourteen of these still having perfect scores. In order to eliminate some of the latter, checkers were placed every 15 miles apart instead of every 25. In all probability ten or a dozen cars will finish the tour on an equal footing, and consequently no one car can be said to have won the trophy. The tour has given a complete demonstration of the ability of the American machine to traverse, at a relatively high speed and without serious breakdowns, the worst roads in civilized communities in North America.

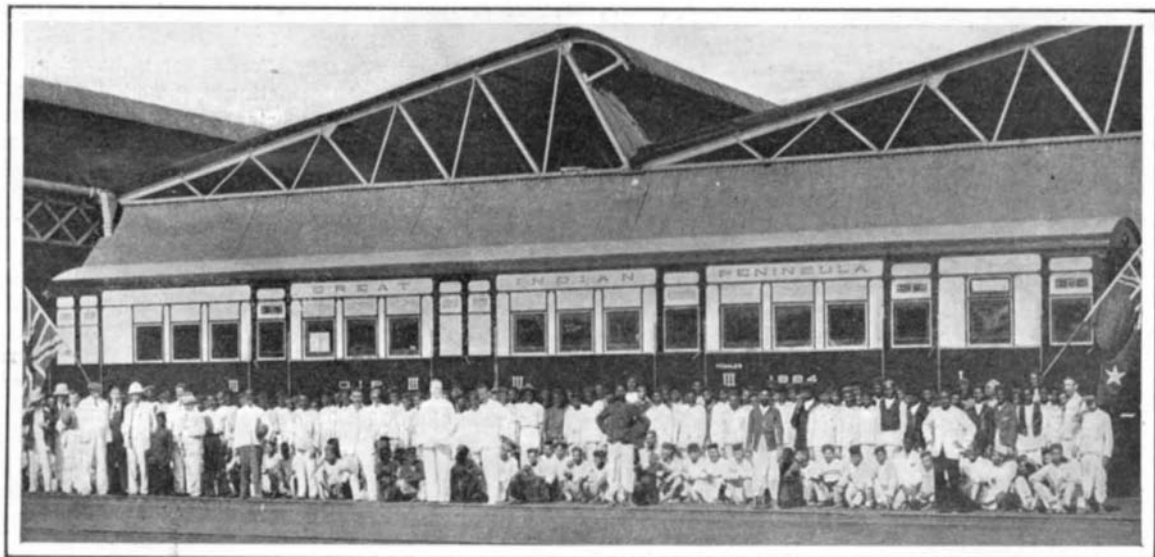


Fig. 3.—The Finished Car on Friday at 4:30 P. M.
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