

Page 66. "All the mistakes in the construction of engines and rolling-stock of the narrow-gauge railways of Canada, which have been corrected at great expense, are being repeated on the metre gauge railways of India."

NOTE.—The above is pretty plain writing for a man that came to the States prejudiced against American railway appliances. But Mr Higinbotham was an educated gentleman in search of the truth, travelled with his eyes open, and had the courage to tell what he saw honestly. The London *Engineer*, in reviewing this report, allowed the following to slip, I suppose by mistake, into its columns: "Now it is true that English engines on English roads very seldom run off, but this results not from the merits of the engine, but from the excellent qualities of the road. And it is worth considering whether an American engine which is capable of running well on a road which sets an English locomotive at defiance might not be found to run more *lightly, cheaply*, and with less practical resistance, and less wear and tear of track than an English engine." Surely the *Engineer* can "blow hot" and "blow cold" when it is in a disposition to blow either.—W.W.E.

In the centennial year 1876, Mr Massey Bromley, a highly-educated and experienced English engineer, Works Manager of the Great Eastern Railway of England, came to this country expressly to study locomotives. He brought me letters of introduction. He was soon put in communication with the best men, and had a chance to see the locomotives and practice of many railways. At the end of his 100 days' furlough, he came back to New York and said to me, "I am going home to build American locomotives." I (E) said, "I doubt you very much; I do not believe you will build driving wheels as we do." He (B) said, "Yes, I will; I believe them to be better and much cheaper than our wrought wheels." (E.) "Well, how about the frames; are you going to adopt our frames?" (B). "No, we cannot afford that; your frames are too costly for us." (E). "Well, what type of engine are you going to build? You say your railway company are going into the coal business." (B). "I am going to build engines like your Moguls." (E). "Why not adopt our Consolidation engines? they are the fellows for the coal trade." (B). "Oh! they are too advanced for us; our directors could not understand them. We have not a siding on our lines that could hold the trains they would haul." (E). "But why not lengthen your sidings, and get the full economy of the thing at once." (B). "No, they would not listen to such a thing."—W.W.E.

Extracts from the Report of Mr. J. Boyd Thompson, General Manager of the Northern Railway of Buenos-Ayres, to his Directors in London.

Buenos-Ayres, 27th June, 1867.

"Our present stock of first-class carriages consists of ten English and two American; the last with seats for 64 each and weigh 10 to 11 tons, or 385 pounds per each passenger. The ten English seat 60 each, and weigh 16 tons, or 597 pounds per each passenger, or 212 pounds for each seat more than the American. Three American seat 72 passengers more than two English, and weigh one ton more. During the past ten months the ten English carriages cost \$40,816 currency for repairs, whilst during the same period the American have cost nothing for repairs, and are at present in better condition than those made in England, though they have been in constant use since the line was first opened. I may also remark that their chilled iron wheels scarcely show any perceptible wear. The American carriages are, in every respect, better and more comfortable, requiring less than one-half the power to propel them that is necessary for the English. It has also been proved that the English carriages are much more injurious to the permanent-way and works, and likewise, in proportion, injurious to themselves, than those of American make. I beg to conclude these remarks with strongly recommending the American-made carriages and wagons, and from experience of their working on the 'Boca' and this line and their fitness for our traffic. They cost less, are not so expensive to keep in repair, run easier, and cause less wear and tear on the permanent-way."

NOTE.—The accuracy of the above can be verified at the office of the Company in London. It appears to be pretty strong testimony coming from a Scotchman who had never been a day in the United States, and was certainly under no American influence. The \$40,816 for repairs was, no doubt, in depreciated currency far below gold value. This report was sent to me from London, in print. I have never seen this Mr. Thompson, or any officer of that railway. Mr. Thompson had no American engines on his railway, so he could not add his testimony on that point. Messrs. Brassey, Whythes, and Wheelwright, contractors for the Central Argentine Railway, sent me an order for all the rolling-stock for that great railway. I had to write them that I could not send the engines if they gave me £10,000 for each, as it was in the midst of our civil war, and all the locomotive works were fully occupied by the Government. Years after this, Mr. Wheelwright wrote me of the engines he had on that railway (over the Pampas, nearly level, and almost entirely straight from Rosario to Cordova, 243 miles), and said, "You would have saved us a mint of money if you could have sent us American engines." I think the English railway world will admit that that firm had pretty "level heads" on their shoulders, and knew what they were about.—W.W.E.

Extracts from an Article on American Locomotives published in "Engineering" in 1871; by A. Brunner, Engineer of Cockerell Works, at Seirang, Belgium.

"Montreal, 1st January, 1871.

"The American railway engine, as compared with European locomotives, bears upon its face the stamp of much fertile originality (similar to that of American steamboats and bridges), when confronted with transatlantic work of a kindred class. . . . I have examined American locomotives in detail [at the manufactory, witnessed their performances on all kinds of track, and I am compelled to confess that what I saw far exceeded my anticipations. . . . One of the peculiarities in American locomotive construction is the framing, which is made of square bar-iron, welded together, slotted, planed all over, and entirely finished. The bar-frames, besides being very rigid in every direction, admit of easy access to the link motion; they form at the same time a good base for attaching the various brackets and guide-plates. The cylinders, which are usually outside, are hung from the top bars of the frames, to insure a firm base for the cylinders; and, to prevent independent strains on the frames, a cast-iron separate bed-plate, or 'saddle,' is inserted between them. . . . As a rule, the various details of the motion and gearing are admirably well proportioned and carried out. . . . The cast-iron wheels form another distinctive feature in American practice. The small, chilled, cast-iron disc wheels of their engine-tender and car trucks answer admirably well, being cheap, strong, and durable at the same time. . . . Much ingenuity is displayed in the manner of setting engine and tender on the wheels: in fact, the problem of making an easy riding engine, offering at the same time the least amount of internal resistance, has been solved by the Americans most successfully. Much might be written on the history of the swivelling truck, the faithful 'trackfeeler' of the American locomotive; it would take a graphic pen to record all the modifications this useful contrivance has already encountered. . . . In outside appearance and finish the American locomotives present much original conception, and not unfrequently real artistic merit. The Yankees seem to place great pride in their engines, and it is indeed a proud sight to see an American engine entering a station, blazing in polished brass, embellished with a rich picture, bells ringing and whistle roaring. We will now proceed to witness the performance of American engines. One of the most striking observations is the ease, not to say 'grace,' with which the comparatively light locomotives do their work—and heavy work, too—over the rough roads of the United States and Canada. The average gross tonnage of passenger trains here is probably double that of English trains; still, with from six to seven passenger cars weighing, loaded, about 20 tons each, a baggage car of same weight, and a Pullman drawing-room or sleeping-car of 30 to 35 tons weight; the engine gets quickly away from the station, and without 'slipping.' Of course there must be some material reason to account for the superior useful effect given by American Engines. . . . The Baldwin Works have turned out not less than 200 locomotives in the year. Locomotive building on this continent has made great progress of late, as verified by the perfect organization of the workshops, and the systematic manner in which the work is turned out. My visit to this great country has made a lively impression on me, which I am sure will be shared by most impartial critics, that, in the speciality of locomotive construction, the Americans are fully equal, if not ahead, of the best European practice."