her up—till ye could run her to a siding, anyway."

"But supposing the electric apparatus failed?" suggests a reporter—with visions of headlines, perhaps. "Supposing the motor driving the gyroscopes broke down; what then?"

"They'd run for a couple of days, with the momentum they've got," answers the inventor. "And for two or three hours, that 'ud keep her upright by itself."

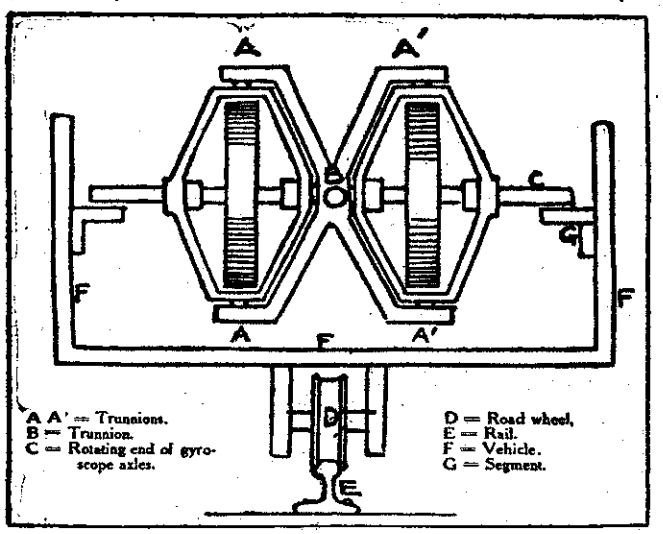
On the short track at Gillingham there are no gradients to show what the car can do in the way of climbing, but here again the inventor is positive. She will run up a slope as steep as one in six, he says. There is no reason to doubt him; the five-foot model that he used to exhibit could climb steeper inclines, run along a rope stretched six feet above the ground, or remain at rest upon it while the rope was swung to and fro. It would do all these things while carrying a man; and, for my part, I am willing to take Brennan's word.

Louis Brennan himself was by no means the least interesting feature of the demonstration. He has none of the look of the visionary, this man who has gone to war with time and space; neither had George Stephenson. He is short and thick-set, with a full face, a heavy moustache hiding his mouth, and heavy eyebrows. He is troubled a little with asthma, which makes him somewhat staccato and breathless in speech, and perhaps also accentuates the peculiar plaintive quality of his Irish voice. There is nothing in his appearance to indicate whether he is thirty-five or fifty-five. As a matter of fact, he is two years over the latter age, but a man ripe in life, with that persistence and belief in his work which is to engineers what passion is to a poet.

The technicalities of steel and iron come easily off his tongue; they are his native speech, in which he expresses himself most intimately. All his life he has been concerned with machines. He is the inventor of the Brennan steerable torpedo, whose adoption by the Admiralty made him rich and rendered possible the long years of study and experiment that went to the making of the mono-rail car. He has a touch of the rich man's complacency; it does not go ill with his kindly good humour and his single-hearted pride in his life work.

It is characteristic, I think, of his honesty of purpose and of the genius that is his driving force that hitherto he has concerned himself with scientific invention somewhat to the exclusion of the commercial aspects of his contrivance. He has had help in money and men from the British Government, which likewise placed the torpedo factory at his disposal; and the governments of India and —of all places—Kashmir have granted him subsidies. Railroad men from all parts of the world have seen his model; but he has not been ardent in the hunt for customers. Perhaps that will not be necessary; the mono-rail car should be its own salesman; but, in the meantime, it is not amiss that a great inventor should stand aloof from commerce.

But, for all the cheerful matter-of-factness of the man, he, too, has seen visions. There are times when he talks of the future as he hopes it will be, as he means it to be, when "transportation is civilisation. Men are to travel then on a single rail, in great cars like halls, two hundred feet long, thirty to forty feet wide, whirling across continents at two hundred miles an hour—from New York to San Francisco between dawn and dawn.



THE TWO BALANCE-WHEELS OF THE GYRO-CAR.

The axle-end (C) corresponds to the point of the top. If, in turning a curve, the car-body (F) should commence to lean to the left, the projecting segment (G) would rise and touch the axle (C) of the right-hand balance-wheel. The balance-wheel would thereupon tend to rise at right angles with G, just as a top tends to rise at right angles with the surface on which it spins. This action would counteract the leaning tendency of the car-body and restore the equilibrium of the car.

Travel will no longer be uncomfortable. These cars, equipped like a hotel, will sweep along with the motion of an ice-yacht. They will not jolt over uneven places, or strain to mount the track at curves; in each one, the wearless gyroscopes will govern an unchanging equilibrium. Trustful Kashmir will advance from its remoteness to a place accessible from anywhere. Street-car lines will no longer be a perplexity to paving authorities and anathema to other traffic; a single rail will be flush with the ground, out of the way of hoofs and tires. Automobiles will run on two wheels like a bicycle. It is to be a mono-rail world, soothed and assured by the drone of gyroscopes. By that time the patient ingenuity of inventors and engineers will have found the means to run the gyroscopes at a greater speed than is now possible, thus rendering it feasible to use a smaller wheel. It is a dream based on good solid reasoning, backed by a great inventor's careful calculations.

Practical railroad men have given to the mono-rail car a sufficiently warm welcome. They have been impressed chiefly by its suitability to the conditions of transportation in the great new countries, as, for instance, on that line of railway that is creeping north from the Zambesi to open up the copper deposits of northwestern Rhodesia, and on through Central Africa to its terminus at Cairo. Just such land as this helped to inspire Brennan. He was a boy when he first saw the endless plains of Australia, and out of that experience grew his first speculations about the future of railway travel. Such lands make positive and clear demands, if ever they are to be exploited for their full value to humanity. They need railways quickly laid and cheaply constructed; lines not too exacting in point of curves and gradients; and, finally, fast travel.

MR. BRENNAN STANDING IN FRONT OF HIS FIRST LARGE MONO-RAIL CAR.

Successful trial of which may mark an epoch in railway transportation.

ACROSS THE CANON ON A MID-TWENTIETH-CENTURY EXPRESS.