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? WHY THE WEATHER ?

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WIND PRESSURE AND RAILROAD TRAINS

Everyone has experienced difficulty in rowing a boat or walking against the wind, especially in open stretches. A wind of 35 miles an hour exerts a pressure of about 3.1 lbs. per square foot and is sufficient to cause inconvenience in walking. A wind of 42 miles per hour exerts more pressure, nearly 4.8 lbs. per square foot and generally impedes progress. In winter, particularly, impeding winds are frequent, as wind velocities are generally higher and the density of the air greater than in summer. Such winds not only affect the pedestrian, but reduce the amount of load a freight train can carry. Thus, "the effects of wind resistance must be calculated by yard masters when making up their trains on days when gales are blowing."

Heavy winds are occasionally strong enough to overturn trains, though in the United States the use of heavy equipment has made such accidents rare. "However, in September, 1921, at Sioux Falls, S.D., a thunder squall blew a train of about 50 empty stock cars from the track." On a certain narrow gage railway in Ireland heavy westerly gales often derailed trains. A pressure tube anemometer was finally installed to give warning of winds of dangerous velocities. When the wind reaches 65 miles per hour, an alarm bell rings and over a ton of ballast is added to each car, but if the wind reaches 85 miles per hour, the trains must be stopped.

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