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A Science Service Feature

? WHY THE WEATHER ?

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Authority on Meteorology.

WIND WARNINGS ON RAILWAYS

There have been two recent cases in the United States of railway accidents resulting from strong winds. In one case a train of twelve cars was blown from the track by a tornado, only the locomotive remaining on the rails, with the result that one passenger was killed and a score or more were injured. In the other case freight cars standing on a siding were blown over a switch onto the main line and wrecked by a passenger express and some uninvited guests of the railway who were sleeping in the freight cars were killed.

Precautions against such occurrences adopted on certain British railways are described in a current article by Prof. R. DeC. Ward. A narrow-gauge railway in Ireland, which is exposed to heavy gales from the sea, was the scene of many derailments until an anemometer was installed in a suitable position on the line and equipped to give warning by ringing a bell in the house of the station master when the wind attains dangerous force. A first signal sounds when the wind reaches 65 miles an hour, and ballast, kept ready at the stations for the purpose, is then placed in the cars to keep them from being blown over. A second warning indicates a velocity of 85 miles an hour, and when this is heard traffic on the line is suspended.

"Near Ulverston, England," writes Prof. Ward, "at the western end of a viaduct there used to be, and very likely still is, a gauge for determining wind velocities dangerous for the passage of trains across the viaduct. Boards, kept in a vertical position by springs, have their deflection from the vertical recorded by means of a pen on a chart, which is driven by clockwork. When the wind pressure reaches 32 pounds per square foot, an electrical contact is made and bells ring in signal cabins at both ends of the viaduct. Trains are then held until the force of the wind moderates."

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