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? WHY THE WEATHER ? Mailed March 22, 1932

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TORNADO-PROOF CONSTRUCTION

Next to a well-designed tornado cellar, the best refuge from a tornado is a staunch building. The possibilities in the way of tornado-proof construction were investigated by a joint committee of the St. Louis Engineers' Club and the local chapter of the American Institute of Architects after the disastrous storm that visited the Missouri metropolis in September, 1927, and the following were some of the conclusions reached:

"The wind velocity near the center of a tornado probably reaches 400 to 500 miles an hour over a small area, and it is not to be expected that any economical construction can withstand the force that will result. On the other hand, there seems to exist on either side of the tornado vortex a strip of varying width that is subjected to direct wind pressure of high intensity, but not too great to be met by economical construction. It would seem that in this particular area the damage might be reduced to less than one-fourth if buildings were properly constructed to withstand wind pressures ordinarily specified in a building code."

In the path of the St. Louis tornado there were several modern buildings that suffered little damage and proved the value of good construction.

"It is natural," says the committee's report, "to suppose that roofs would suffer the most, but in most cases the damage was caused by the failure of the masonry on which they were supported and by lack of proper anchors The indisputable teaching of the disaster is the importance to all buildings of integral bonding throughout all parts, from the individual bricks of a wall to the completed structure."

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