

of March 10 the weather map showed freezing weather to the Gulf Coast, with the temperature down to 28° at Jacksonville, Fla., New Orleans, La., and Charleston, S. C., while readings between 16° and 22° were reported in Arkansas and Tennessee. Meridian, Miss., and New Orleans, La., reported the lowest temperatures ever recorded so late in the season.—*S. D. F.*

The severe norther which visited the Gulf States and much of the Plateau of Mexico in Mexico in March brings up the following item on a worse visitation in December, 1924.¹ At Houston, Texas, the temperatures fell from 80 in the afternoon of the 18th to below freezing the following morning. A minimum of 22 occurred the morning of the 20th. The rain with which the norther began changed with falling temperature into snow and ice (sleet) and the whole countryside became covered with a thick glaze. Trees, poles and wires were much damaged, even house roofs caved in with the weight of the ice. Cattle in the open prairie died in thousands directly on account of the cold, and partly owing to the ice covering on the ground which resulted in a shortage of food and water.—*C. F. B.*

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 teachings 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."—*C. F. Talman*, in *Why the Weather?* (SS).

WINDSTORM INSURANCE

Insurance of buildings against damage by winds has been conducted in the United States under various names. It has most commonly been called "tornado insurance," but also "cyclone insurance" and sometimes

¹ Dr. Max Hannemann: "Temperatur und Windverhältnisse im Küstengebiet von Texas unter besonderer Berücksichtigung der 'Northers.'" *Ann. d. Hydrog. u. Mar. Met.*, Juni, 1927, pp. 170-177.