EDITORS: Please substitute this sheet for the Why The Weather mailed yesterday: Note correction.

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? WHY THE WEATHER ?

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HOW TORNADOES EXPLODE BUILDINGS

Press reports of the recent tornado in St. Louis state that the greatest amount of damage to buildings appears to have been done by the explosive effects of the confined air. Walls were thrust outward and buildings were thus caused to collapse because the pressure of the air inside was greater than that outside at the moment the storm passed.

This effect, commonly observed in tornadoes, is often described in rather loose and inaccurate language. The air inside the vortex of these revolving storms is rarefied by centrifugal action, but nothing approaching a vacuum is produced. In an extreme case, with a wind of 400 to 500 miles an hour, the pressure outside a building in the center of the storm would, as may be calculated, be reduced by hardly one-tenth of its normal value. This difference would account for an outward thrust on the walls amounting, in round numbers, to 200 pounds per square foot. If this pressure were applied gradually it might be withstood, but it comes as a sudden push. Often its only effect is to break windows.

If doors and windows are open the indoor air escapes through them and the walls are not subjected to much outward pressure, though of course they may be wrecked by the fury of the winds.

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