

Man has tried again and again to harness the wind for his own pleasure and profit. He has built windmills which drive millstones or complicated electric generators, and he has constructed ships and airplanes to make the best use of the air streams. The winds help him in matters great and small, but he does not have them completely under control. Some of them leave him helpless and make a mockery of his ingenuity, wisdom, and technical knowledge. Some atmospheric conditions can create air movements of almost unbelievable force and when faced by these, man is merely a helpless dwarf who can only pray for deliverance.

One of these frightful winds is the tornado. Originally the name only referred to the stormy squalls on the edge of rotating storms on the African Gold Coast. Nowadays we call all the extraordinary violent whirlwinds of small diameter "tornado." They occur most frequently in Australia and the United States, but are also known in Europe. They are accompanied by characteristic funnel shaped "tornado clouds."

To this day we don't not know exactly how a tornado originates. The American weather expert W. J. Humphreys believes that at least twenty-six different conditions have to be fulfilled before a tornado can develop. It is certain that extremely hot air must meet cold air before a tornado can be produced, and it is probable that the so-called jet streams also play an important part in their creation.

Some areas seem to be particularly favorably constructed for the development of tornados, and one of these is the Mississippi basin. In this area the very warm humid air from the Gulf of Mexico streams northward without hindrance and meets Pacific air which has been cooled by its high passage over the mountains, thus giving rise to atmospheric conditions not met anywhere else on earth.

The Mississippi region suffered one of its most catastrophic tornadoes on the 23rd of March, 1952. Exceptionally hot, moist air collided with a stream of cold air coming from the North over the State of Arkansas. The two air masses met like two men hurrying in different directions. They became locked together and tried to pass each other. Witnesses on the ground saw ghostly white clouds and oily-black vapor formations all jumbled together in the sky. Soon the air began to whirl upwards, slowly at first, but gathering speed. It behaved like liquid water stirred in a pot, rising higher up the sides the faster it is stirred. The whirling motion pressed the air outwards leaving a center of increasingly rarified and cold air (air becomes colder as it grows rarified). As a result of the cooling, the water vapor condensed and formed clouds which were thrown outwards from the center until they combined into a rotating ring which soon took on the shape of a tube.

Not long after that, the tubular cloud turned into a funnel, resembling the dirty grey trunk of an enormous elephant which

was fumbling its way towards the ground. At the same time, the air immediately above the ground began to move. Dried leaves whirled upwards. A similar but transparent structure of warm air was feeling its way upward towards the funnel. The parts combined, and the transparent lower portion turned into a tube of thick cloud. When fully formed the tornado hung bent in the sky like a supernatural bow. The next thing that happened was that five more tornado tubes grew downward from the clouds, producing on an eyewitness the effect of "rolling along like six reeling drunkards." They made a thunderous noise like the rattle of a thousand freight trains.

The first victim was a policeman who was trying to give a last minute warning to the town of Dyersburg (Tennessee). As he was driving along, one of the tornadoes picked up his car and flung it two hundred yards with the wheels upwards. The policeman was killed instantly. Immediately afterwards, the tornado tore through the little town with a grinding roar. Men, animals, and roof tiles were tossed together. Telephone poles snapped, the wool was torn from grazing sheep, houses caved in, and mile-wide areas were shaved bare in fields and forest. Another whirling wind sucked a man through an open window and hung him by his heels in a forked branch. A mass of dust, twigs, fence poles, and bits of metal whipped through the streets, killing everything in its path. With apocalyptic fury the tornadoes raged through the States of Arkansas, Tennessee, Alabama, Kentucky, Mississippi, and Missouri. Two hundred and fifty people lost their lives, more than two thousand were injured and several thousand left homeless. The material damage amounted to several million dollars.

Nine hundred and sixty-one tornadoes hit the United States alone during the "record" year of 1957. In 1953 also there were several bad ones, notably that which struck Waco (Texas) on the 11th of May. During the afternoon, floods of rain masked the noise of the approaching storm. Nobody was prepared when suddenly the first houses collapsed. Several seconds later 113 people were dead and many hundreds injured. Not a house was left standing on a nine hundred foot wide track straight across the town.

A tornado often only measures thirty to one hundred and fifty feet across and has a maximum width of 1300 feet. It moves across the country at between six and thirty-six miles an hour, can last from five seconds to three hours and cover distances of up to three hundred miles. Its track is often only as wide as a street, but the damage is then all the more severe. North America suffered no less than 5034 tornadoes in the years of 1916 to 1949, which caused 7892 deaths. The average annual death-rate in the U.S.A. due to these "raging elephant trunks" is, therefore, 232. Luckily this number is lower today, since excellent storm warnings are in operation and there are many safety cellars in the danger areas.