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The Austin, Texas, Tornadoes of May 4, 1922

BY

FREDERIC W. SIMONDS

Professor of Geology



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The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

Mirabeau B. Lamar

THE AUSTIN, TEXAS, TORNADOES OF MAY 4, 1922*

On Thursday afternoon, May 4, 1922, about four o'clock, the writer was suddenly summoned from his home, a block and a half north of the campus of the University of Texas, Austin, by excited shouts directing his attention to an unusual cloud display in the north. Reaching the street he saw, in a direction west of north, a quickly advancing, dark and threatening mass of storm cloud from which depended a rapidly whirling funnel so characteristic of tornadoes. This funnel, however, was not hanging directly downward, but was inclined to the west or south of west at an angle of 45 degrees. This deflection may have been due to topographic effects, as the land west of the city is rugged and broken—the dissected border of the Edwards Plateau. Then, too, the Colorado River here passes from its canyon valley, through the plateau, into a broad open valley. It is of common occurrence for rain storms to follow the river valley and possibly on this occasion the air currents diverted the tornado from what otherwise would have been its course. Had the funnel hung perpendicularly, striking the ground here and there as is usually the case, the damage in and about Austin would have been much greater.

Even while we looked the attenuated end of the funnel broke into two or three pieces which were quickly welded together. An excellent photograph, taken from the Littlefield Building in the heart of the city, shows the inclined funnel with its extremity bent downward. (Pls. I-II.)

That this storm did, however, strike the ground in at least four places is shown by the unroofing of Mr. Wade's house, † near the crossing of the Georgetown and Spicewood

*Read at the Annual Meeting of the Southwestern Geological Society, Dallas, Texas, September 15, 1922.

†In addition to the damage above stated this house was forced from its foundation some eight feet in a northward direction. It was stated by a member of the family that the wind on this occasion blew from the east. This would seem to indicate that the house lay within the northeast quadrant of the rotating storm.



—Gazley Company, Photographers

Plate I. The First Austin Tornado of May 4, 1922, as seen from the Littlefield Building looking northwest.



—Jordan Company, Photographers

Plate II. Another view of the First Austin Tornado, as seen from building, 615 Congress Avenue, looking northwest.

Springs road six miles north of Austin; by leveling of a small house a mile to the southwest; by the extensive property damage at the State Institute for Deaf, Dumb and Blind Colored Youths, near the northwest limits of the city; and by the minor wind effects at and near Deep Eddy, a summer camp on the Colorado River. These localities are indicated on the accompanying map (Pl. III) as Ax, Ay, A1, and A2, respectively.

At the Institute, the laundry, a brick structure, was completely destroyed, three of its four walls having been blown outward. In addition other buildings were unroofed or blown from their foundations, while sheds completely disappeared and of garages only the floors were left. Notwithstanding the high wind velocity, the flying timbers and missiles of all kinds, the persons here injured were few in number and none seriously.

At Deep Eddy trees were uprooted or stripped clean of their foliage, cabins unroofed or blown down and observers

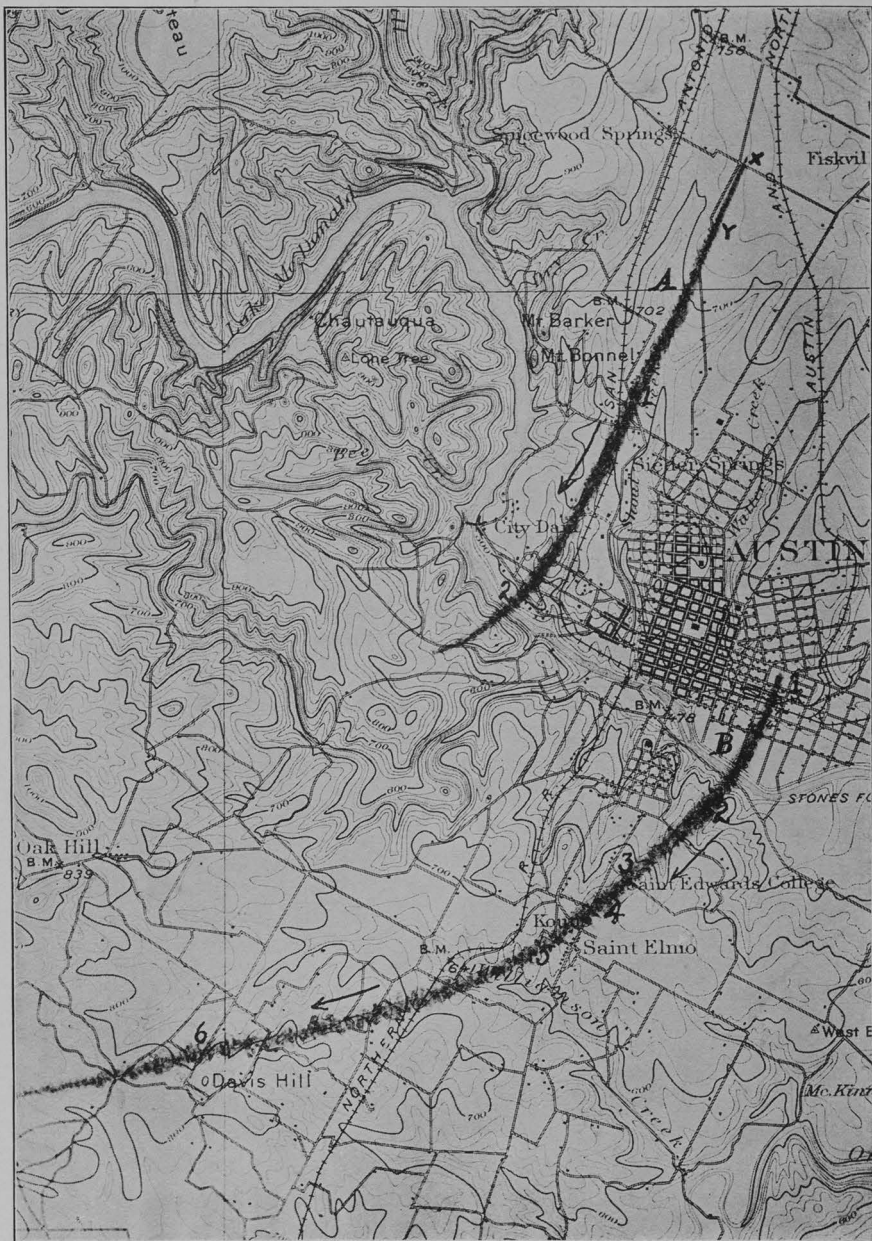
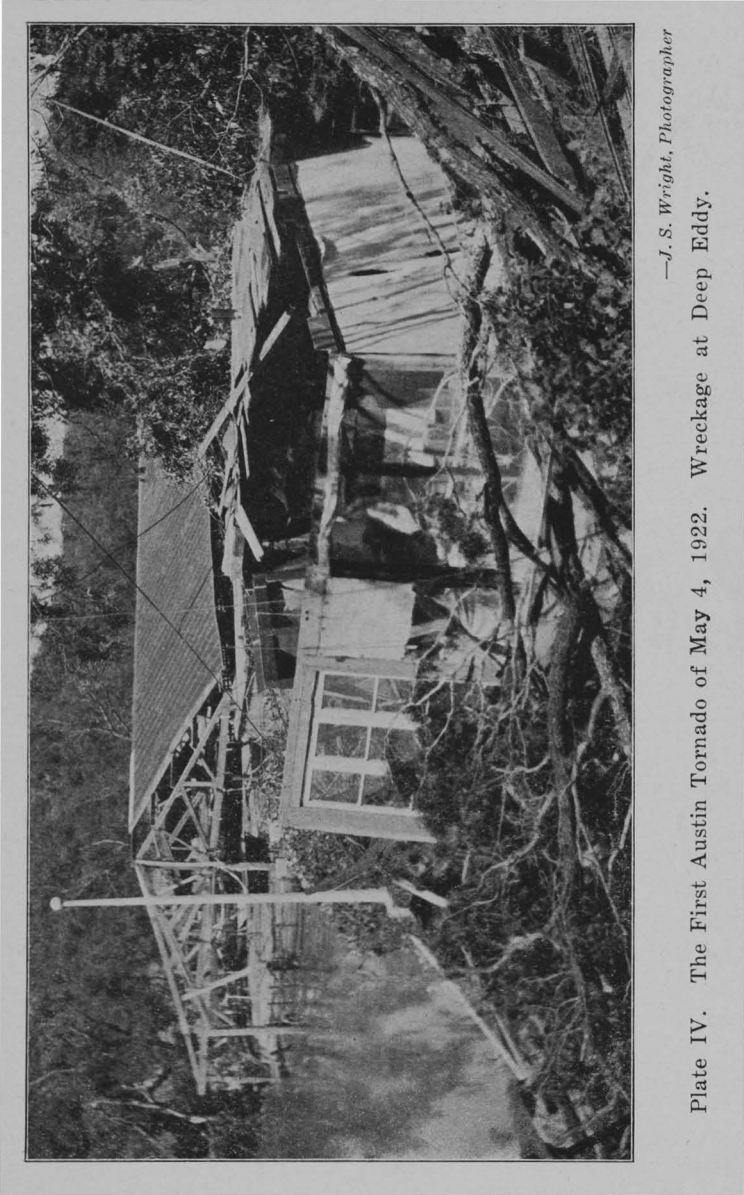


Plate III. Map showing the paths of the Austin, Texas, Tornadoes of May 4, 1922. "A" Tornado first seen in the northwest. "B" Tornado originating in the eastern part of the city. Base: Topographic map of the Austin Folio, U. S. G. S. Scale: |———|———|=2 miles.



—J. S. Wright, Photographer

Plate IV. The First Austin Tornado of May 4, 1922. Wreckage at Deep Eddy.

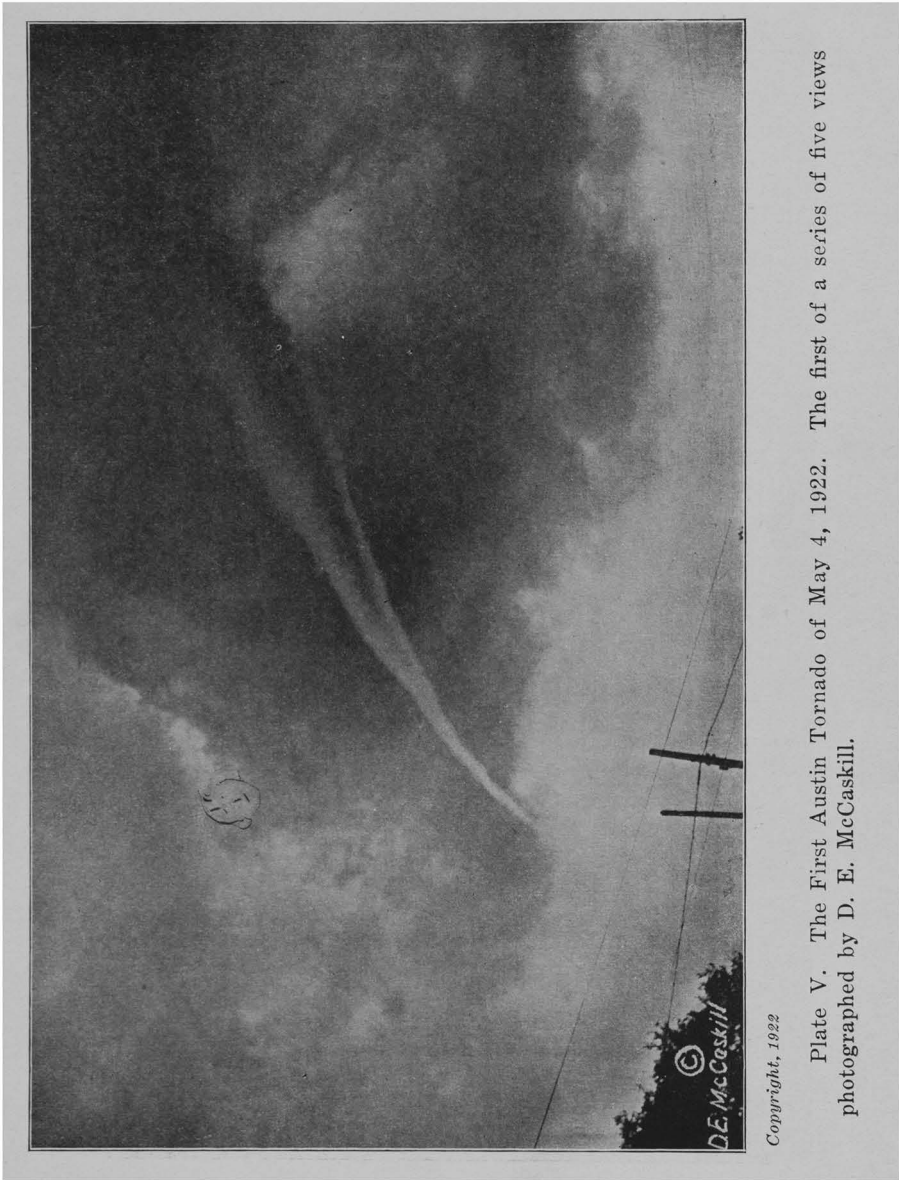
at a distance report tree trunks and branches carried high in the air. (Pl. IV.)

In a series of five excellent photographs, Mr. D. E. McCaskill of the University of Texas Photographic Laboratory (Pls. V-IX), has recorded the wonderful changes in the tornado's funnel during a portion of its course. The pictures were taken at short time intervals from a locality on the west side of the University campus, the camera being directed to the northwest.

Almost simultaneously with the above described tornado another twirling storm originated in the eastern part of the city and with increasing fury swept onward in a south-westerly and then a westerly course.

It first struck the ground in the State Cemetery where a tree was uprooted (B1 on map); next, the store of Fogle and Fogle, 1401 East Sixth Street, corner of Navasota, the building being unroofed and otherwise injured;* crossing Navasota Street in a southwest direction, it blew a small house from its foundation and destroyed its front gallery; and beyond the railroad tracks it unroofed a small building belonging to the Producers Oil Company. Farther on it damaged the Tenth Ward Fire Station and several small houses and outbuildings in the Colorado River bottom, crossed the river throwing spray, observers say, high in the air, and invaded Travis Heights, a recently built suburb (B2 on map). Here also houses were unroofed and otherwise badly damaged and large trees uprooted (Pl. X). The storm now swept over rising ground; the larger trees were prostrated and the cedar growth torn and twisted, but for the most part retaining its hold upon the rocky soil. Speeding on it completely annihilated several dwellings, and in some instances stripped the larger trees of their foliage. It then encountered St. Edwards College which occupies a

*Mr. T. E. Fogle, of the firm of Fogle and Fogle, states that he stood in the street and watched the tornado exhibit in the northwest for several minutes before the wind unroofed his store. This and other similar testimony goes to show that the storm originating in the eastern part of the city should be designated as the *Second Tornado*.

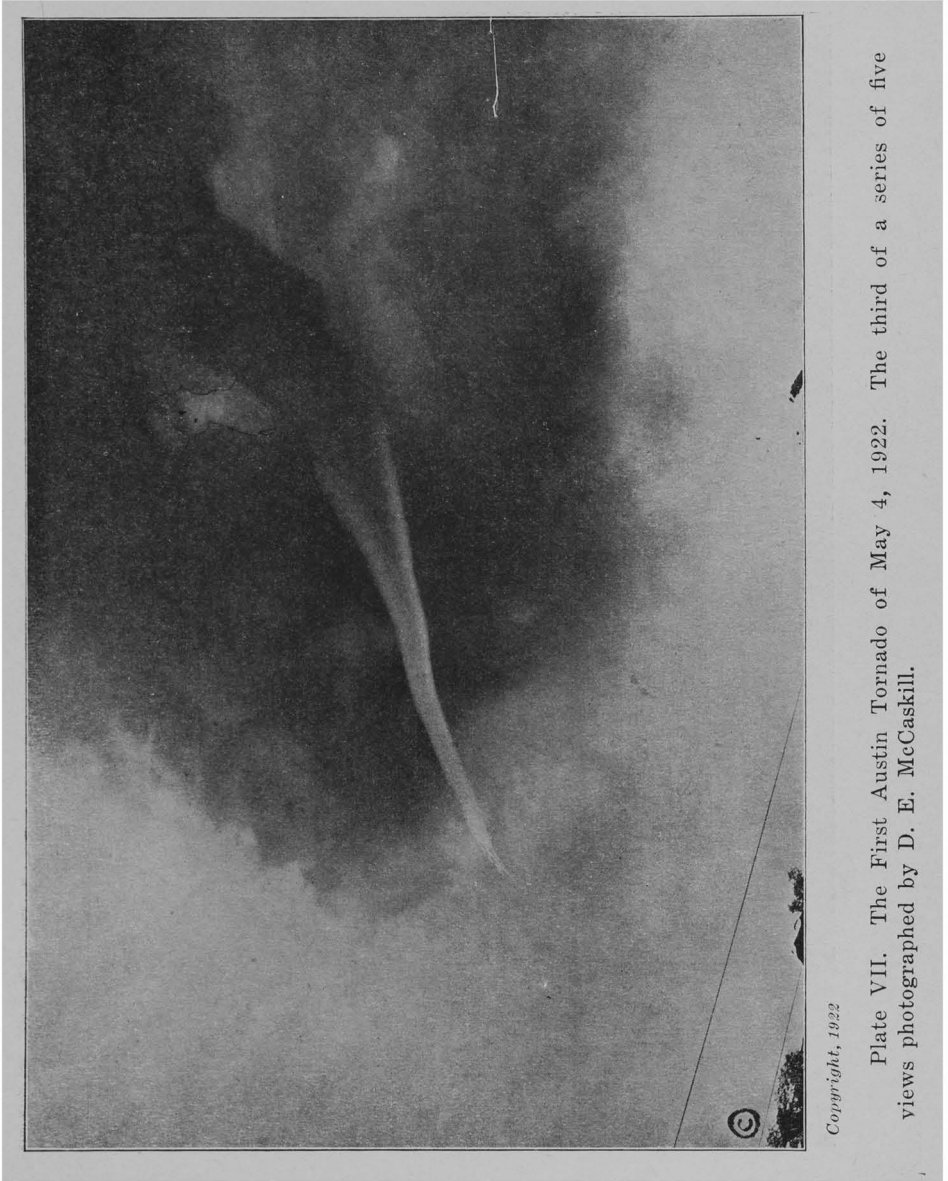


Copyright, 1922

Plate V. The First Austin Tornado of May 4, 1922. The first of a series of five views photographed by D. E. McCaskill.



Plate VI. The First Austin Tornado of May 4, 1922. The second of a series of five views photographed by D. E. McCaskill.



Copyright, 1922

Plate VII. The First Austin Tornado of May 4, 1922. The third of a series of five views photographed by D. E. McCaskill.



Plate VIII. The First Austin Tornado of May 4, 1922. The fourth of a series of five views photographed by D. E. McCaskill.



Copyright, 1922

Plate IX. The First Austin Tornado of May 4, 1922. The last of a series of five views photographed by D. E. McCaskill.

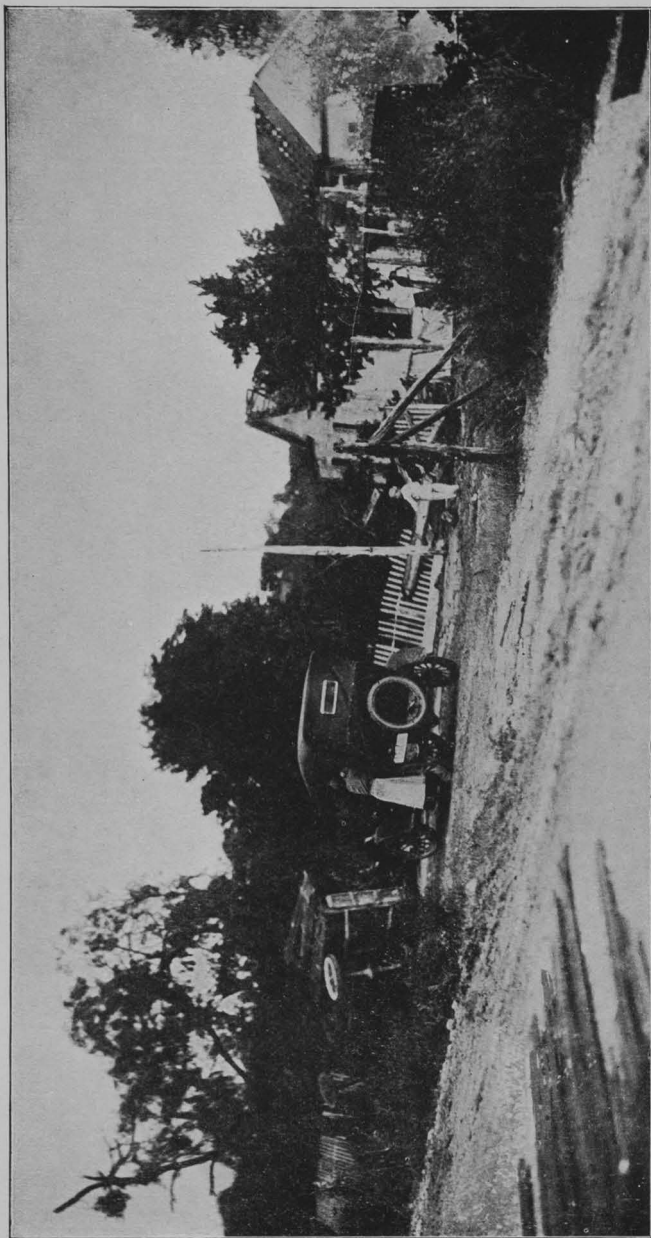
commanding site overlooking the Colorado Valley and the City of Austin (3 on map). Here the dormitory building, a three-story structure of brick, was not only unroofed but the upper story also was destroyed (Pl. XI) and the power plant and the gymnasium wrecked. The students had a thrilling experience and one lost his life. With increasing magnitude and violence the tornado swept over the near-by "Penn Field" (B4 on map), the former seat of the "Radio School" of the University of Texas, now occupied by the Woodward Manufacturing Company. Here occurred the greatest property loss, two people were killed, and a score or more painfully injured. Five large buildings, four of brick and one of frame construction, were reduced to a confused mass of wreckage and the great steel water tank felled to the ground. (Pls. XII-XIII.)

From appearances after the storm, a veritable rain of timbers, planks, splinters and roofing must have swept over the Post Road leading from Austin to San Antonio. As automobile travel on this highway is, as a rule, quite heavy it is nothing short of miraculous that no lives were lost.

St. Elmo schoolhouse next lay in the path of the storm. This building of frame construction, about sixty feet long by thirty feet wide, was pushed at least twenty feet from its foundation but not overturned. Here it was noted that splinters of wood, probably from Penn Field, had penetrated the roof in several places. From this point onward the tornado seems to have veered more strongly to the westward. It soon struck the Hartkoff Dairy and the dwelling and other buildings were swept completely away. (Pl. XIV.)

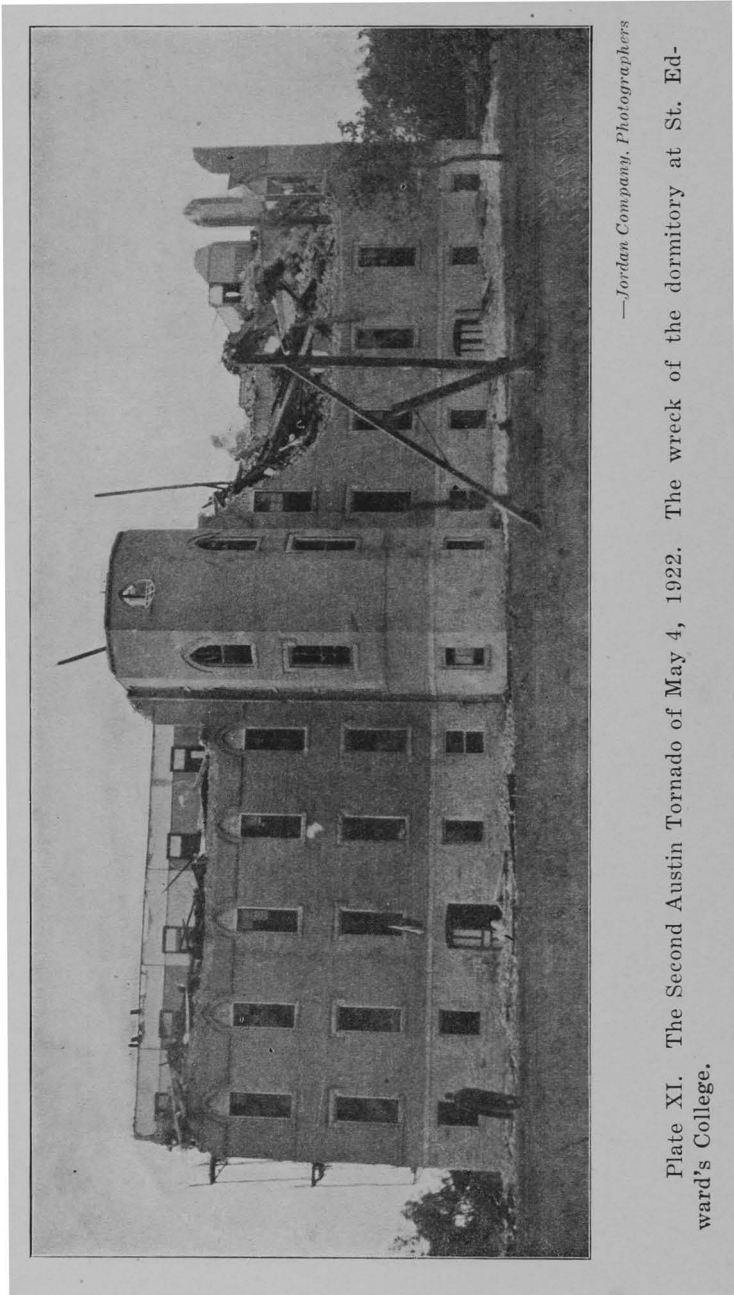
Thus far fallen trees (Pl. XV) had indicated the general direction taken by the storm but a short distance southeast of the dairy, at the home of a Mr. Tully, which had been partially wrecked, large trees had been uprooted and had fallen in an opposite direction, i.e., towards the northeast. This was of special interest, for here was the evidence of the whirling motion.

Two and a half miles southeast of Oak Hill, eight or more-



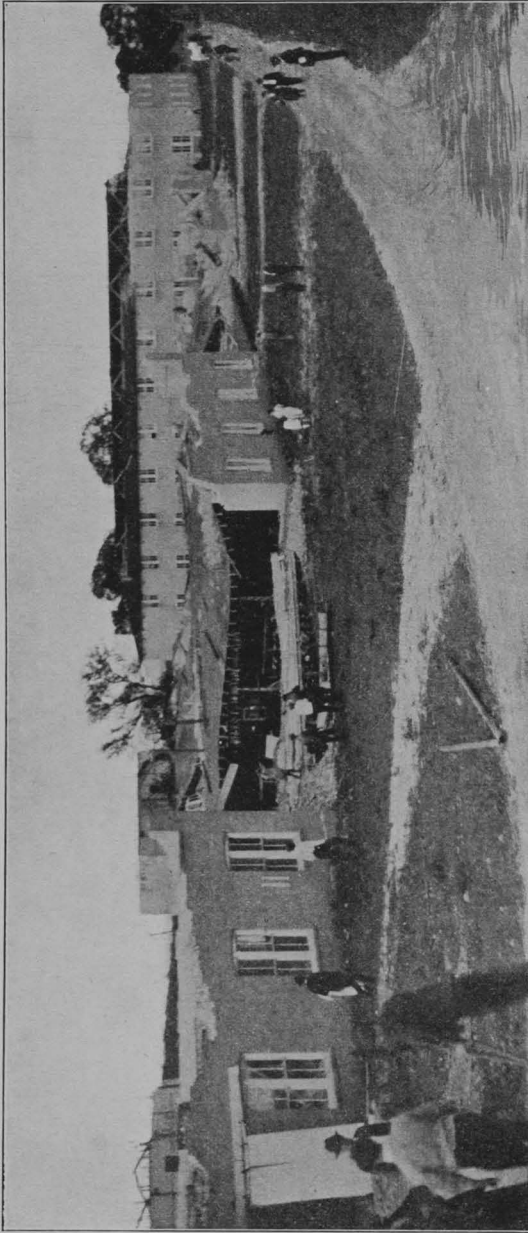
—D. E. McCaskill, Photographer

Plate X. The Second Austin Tornado of May 4, 1922. The path of the storm between Travis Heights and St. Edward's College.



—Jordan Company, Photographers

Plate XI. The Second Austin Tornado of May 4, 1922. The wreck of the dormitory at St. Edward's College.



—*Jordan Company, Photographers*

Plate XII. The Second Austin Tornado of May 4, 1922. Damaged buildings of the Woodward Manufacturing Company, Penn Field.

miles from its origin in Austin, the tornado completely destroyed the Bargsley home, causing the death of six persons. The violence of the storm at this point is shown by the fact that of the house scarcely a vestige remained, barring the stones used in the chimney. The heavy timbers and large logs used in its construction had completely disappeared. Visitors on the scene were amazed to find that even the fowls had been plucked of their feathers.

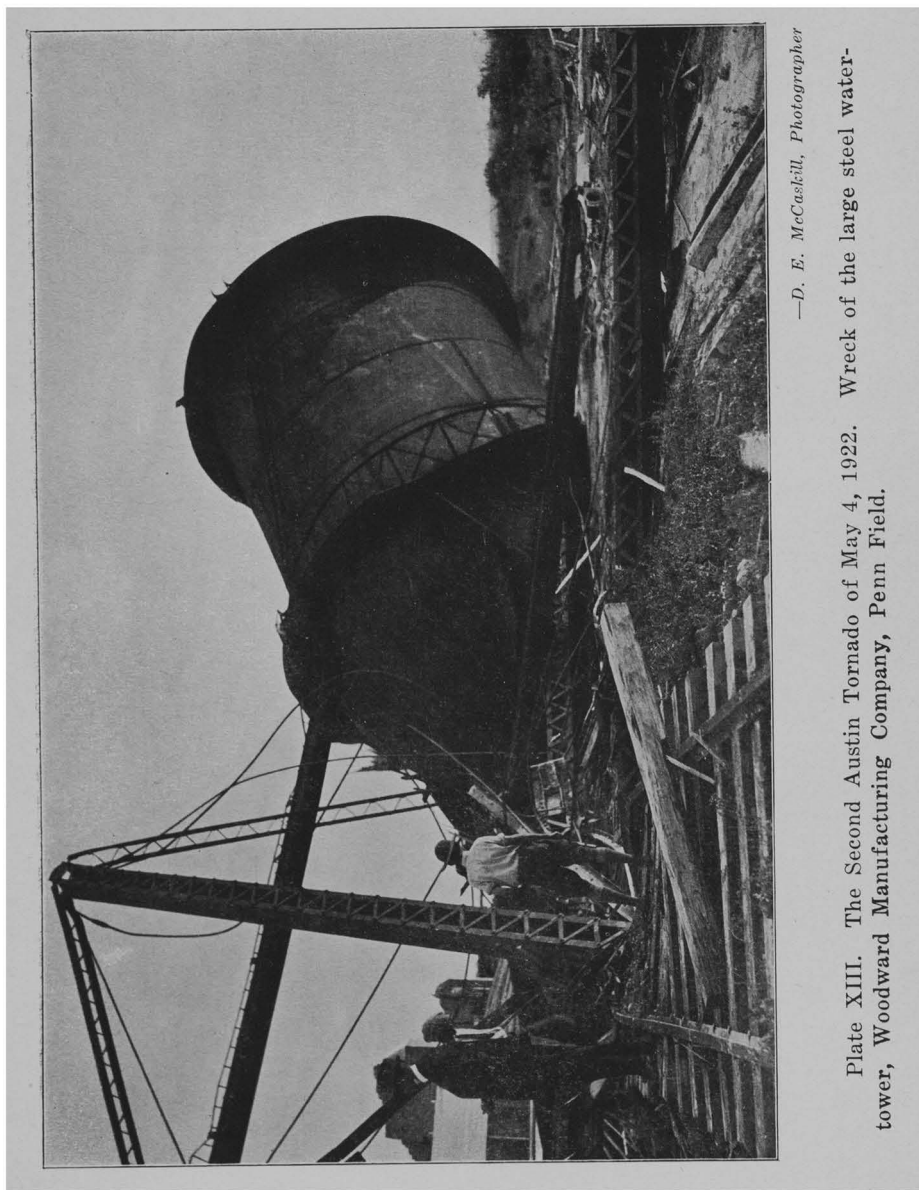
The effects of the storm could be traced farther in a south of west direction by the fallen timber and the debris scattered over the fields. A portion of the forest growth is of cedar (*Juniperus sabinooides*). This had been torn and twisted in a remarkable manner showing that it had offered great resistance to the wind.

Shortly after the tornado had passed Penn Field, on its course to Oak Hill, Mr. R. L. Cannon, from a window on the third floor of the Main Building of the University, secured two photographs. The storm is estimated to have been six or seven miles distant. In the first (Pl. XVI) the curtain of dark storm clouds, in appearance not unlike that of the usual "norther," had nearly reached the horizon. From it a heavy pendant mass, distinctly outlined against a lighter background, reached the surface of the earth. This included not only the funnel of the tornado but probably a great quantity of dust and other debris drawn into the column during its excursion across Penn Field and the dairy plant.

In the second photograph (Pl. XVII), taken five minutes or less later, the storm had passed farther to the west and through what we conclude to be dust can be seen the short, thick-set funnel extending to the ground.

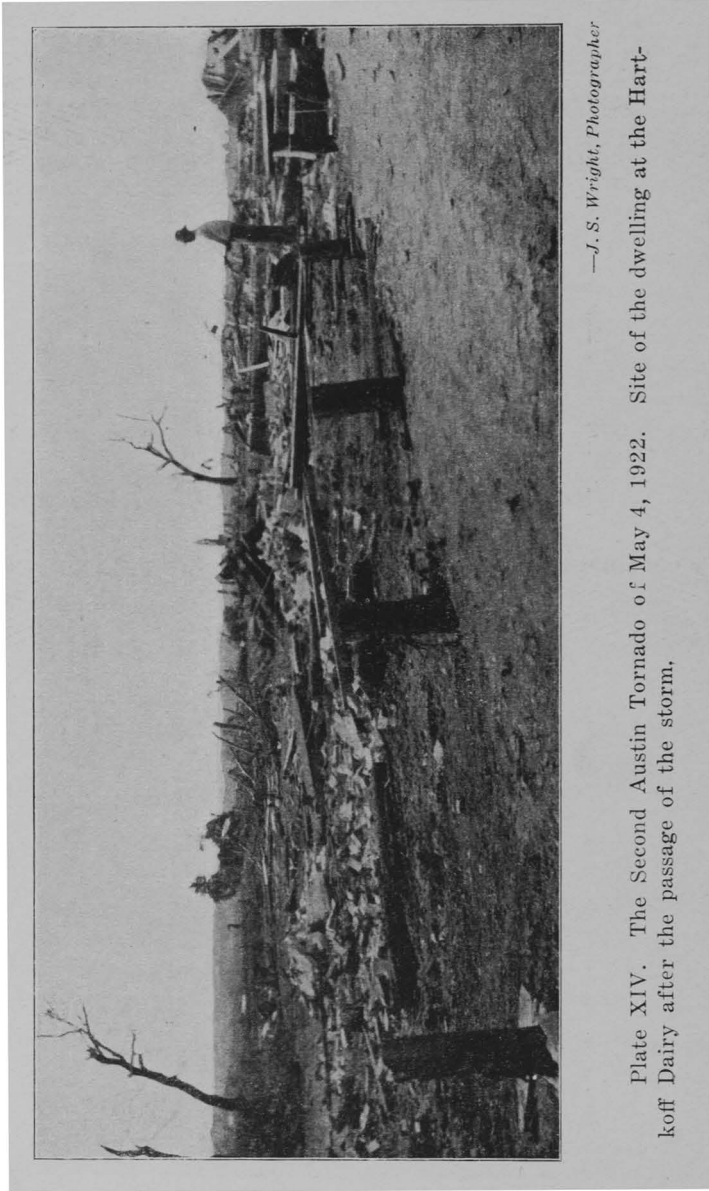
That two tornadoes should originate within so limited an area and should present so marked a difference in their appearance is quite unusual. The camera has, however, made the record.

Barographic measurements taken at the University of Texas, May 4, 1922, from one to six p. m. were as follows:



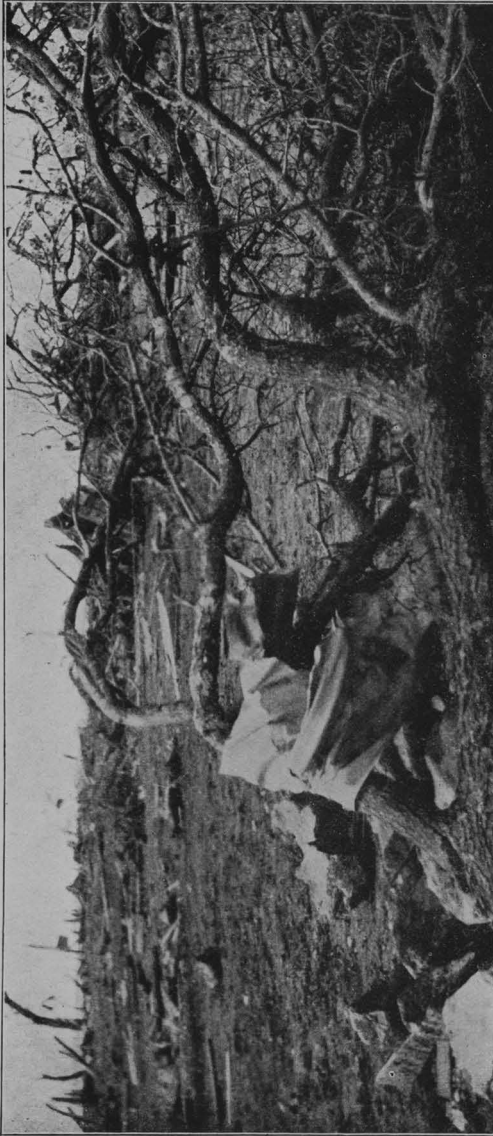
—D. E. McCasill, Photographer

Plate XIII. The Second Austin Tornado of May 4, 1922. Wreck of the large steel water-tower, Woodward Manufacturing Company, Penn Field.



—J. S. Wright, Photographer

Plate XIV. The Second Austin Tornado of May 4, 1922. Site of the dwelling at the Hartkoff Dairy after the passage of the storm.



—*J. S. Wright, Photographer*

Plate XV. Path of the Second Austin Tornado of May 4, 1922. Destruction of timber near the Hartkoff Dairy.

1:00 p. m. -----	29.26	4:10 p. m. -----	29.22
2:00 p. m. -----	29.25	4:20 p. m. -----	29.19
3:00 p. m. -----	29.21	4:30 p. m. -----	29.23
3:10 p. m. -----	29.18	4:40 p. m. -----	29.24
3:20 p. m. -----	29.17	4:50 p. m. -----	29.24
3:30 p. m. -----	29.15	5:00 p. m. -----	29.23
3:40 p. m. -----	29.13	5:15 p. m. -----	29.23
3:50 p. m. -----	29.17	5:30 p. m. -----	29.24
4:00 p. m. -----	29.24	5:45 p. m. -----	29.26
		6:00 p. m. -----	29.23

The day was oppressively warm and immediately preceding the arrival of the first tornado Superintendent Martin of the Institute for Colored Youths noted the passage of a hot wave. Following the storm there was a brief shower of hail stones some of which were of larger size than a pigeon egg.

During the passage of both tornadoes there were many instances of the alternate destruction and escape of nearby



Plate XVI. The Second Austin Tornado of May 4, 1922. The first of two views photographed by R. L. Cannon from the third floor of the Main Building, University of Texas, looking southwest.



Plate XVII. The Second Austin Tornado of May 4, 1922. The second of two views taken by R. L. Cannon from the third floor of the Main Building of the University of Texas, looking southwest.

properties: here a house lost a roof while the houses on either side suffered no injury; there large trees were uprooted while the adjacent dwellings bore no evidence of the tornado's presence. This "hit and miss" action was noted in Travis Heights.

The transporting power of the tornado is also a matter of interest. A portion of the roof torn from the Institute for Colored Youths was found near Deep Eddy, having been carried over three miles, and Mr. A. L. Fogle has in his possession an invoice sheet rendered by McNamara Brothers to the St. Edwards Confectionary which was picked up in a pasture on his ranch 55 miles south of Austin.

The largest financial loss was sustained by the Woodward Manufacturing Company in the destruction of its Penn Field plant. The greatest loss of life in any one locality occurred near Oak Hill, six persons having been killed in the wreck

of the Bargsley home as previously stated. At other points in its course the second storm brought death to six persons and as many as fifty were sorely wounded.

The total property loss due to both tornadoes is estimated to have been between \$300,000 and \$350,000.

June 12, 1922.

