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? WHY THE WEATHER ? Mailed September 18, 1931

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HOW NEWTON MEASURED THE WIND.

The earliest published description of an instrument for measuring the speed or force of the wind appeared in the year 1667, though it is not certain that no instruments for this purpose existed before that year. It is unlikely, however, that any were in use as early as 1658, when Isaac (later Sir Isaac) Newton utilized his own body as an anemometer. The story is recorded as follows by Sir David Brewster:

"Sir Isaac, himself, told Mr. Conduit that one of the earliest scientific experiments which he made was in 1658, on the day of the great storm when Cromwell died, and when he himself had just entered his sixteenth year. In order to determine the force of the gale he jumped first in the direction in which the wind blew and then in opposition to the wind; and after measuring the length of the leap in both directions, and comparing it with the length to which he could jump in a perfectly calm day, he was enabled to compute the force of the storm. Sir Isaac added that when his companions seemed surprised at his saying that any particular wind was a foot stronger than any he had known before, he carried them to the place where he had made the experiment and showed them the measures and marks of his several leaps."

As the performance of a mathematical and philosophical genius like Newton, the crudity of this procedure is astonishing, since the accuracy of the result would necessarily depend upon his putting forth exactly the same effort in leaping against the wind as in leaping with it. As Brewster remarks, "had he, like Coulomb, employed a shred of paper instead of his own person and observed the time it took to fly through a given distance, he would have obtained a better substitute for an anemometer."

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