

The Secretary-Treasurer regrets to admit that new memberships have come in too slowly to sustain the BULLETIN on its present scale for the rest of the year. Everything is here but the support!

When you know of a good thing tell others about it. Sell the Society and its BULLETIN to your friends!

NOTES ON AERONAUTICAL METEOROLOGY.

The Committee on Aeronautical Meteorology which has had the majority of its members quite conveniently located in Washington, D. C., has, within the past few weeks, been somewhat scattered. For the convenience of members of the Society and committee members, the following new addresses of certain committeemen are published:

Lt. Col. C. C. Culver, Ft. Sam Houston, San Antonio, Tex., (after August 25, 1922).

Major W. R. Blair, Signal Corps School of Meteorology, Camp Alfred Vail, Little Silver, N. J.

Mr. Ralph Upson, Engineering Dept., Aircraft Development Corporation, 51 West Hancock Street, Detroit, Mich.

Mr. William F. Reed, Jr., formerly lieutenant in the United States Navy, is at present in Europe participating in the International Balloon Race, to be held from Zurich, August 6th. Upon his return to the United States, Mr. Reed will be located in the South. His address will be published later.

A recent *Science Service* bulletin contains the report of the exploit of Lieut. Junius P. Smith, A.S., Langley Field, Va., in landing a free-balloon in the field from which he had ascended. "Carried off in one direction," says the bulletin, "the aeronaut ascended until he struck a calm. Figuring that the calm was caused by two strong air currents moving in opposite directions, he threw out ballast, rose above the calm, caught the current moving swiftly in the direction opposite from which he had come. After riding at his pleasure in that direction, he descended and caught the first current again and returned to the exact spot on the field from which he had arisen."

While this experience is certainly unusual, it is by no means the first time it has happened. Capt. Goodale, a veteran lighter-than-air pilot, once told the writer that he had landed within the small balloon field at Ft. Omaha, his starting point. He ascended in an easterly surface wind, passed into low stratus clouds, assuming that he was continuing his westerly course. Unable to see the ground, and somewhat puzzled as to the source of city noises below he descended after a time to find himself in Iowa just east of Ft. Omaha, again in the east wind. By careful drag-rope he succeeded in bringing his balloon back to the starting point.

Another veteran balloonist, especially well known on the Pacific Coast, George B. Harrison, performed somewhat similar tricks with the land and sea breezes when they occurred with the cyclonic wind of the proper direction. He is said to have caused no end of excitement among the spectators by sailing audaciously out to sea. When he had gone what he regarded as a safe distance he rose or descended, as the case may be, until he reached the return current, and then delighted the onlookers by bringing his craft safely back to land.

The National Elimination Balloon Race from Milwaukee on May 31st was one of those races in which the meteorological forces were especially conspicuous, and in which the contestants were challenged to employ their meteorological knowledge and skill to the utmost. The winning balloon landed in Quebec, near St. Jerome, a distance of 866.5 miles great-circle distance from the starting point. The balloons placing second and third landed near Neosho, Mo., and Eminence, Mo., 553.4 and 431 miles, respectively, from Milwaukee. The remaining eight contestants, and the one non-contestant Navy helium-filled balloon, landed at intermediate points within these limited directions. Four landed in Missouri, two in Illinois, one in Indiana, and two in Ohio. The wide diversity of directions, and the fact that the winning balloon exceeded its nearest competitor by 313 miles indicates the keen nature of the contest. Moreover, the winner was in the air only 17 hours, whereas those taking second and third place were in the air over twice as long.

A new feature of this race was the use of radio receiving apparatus by two of the balloons. The balloonists were able to hear weather reports as well as much entertainment—somewhat less essential to the progress of the race, but no doubt quite worth while in relieving the monotony of the airy solitude. This, with the use of pilot balloons released at intervals from the basket for the detection of more favorable currents above and below, should lead to the display of even greater meteorological skill in future races.

The three winning pilots, Major Oscar Westover, of the Air Service, Mr. H. E. Honeywell, and Lieut. W. F. Reed, Jr., of the Navy, have, with their aides and assistants, recently sailed for Europe, to represent the United States in the International Race which is to start from Zurich on August 6th. It is to be hoped that one of these will achieve the coveted first place, and bring next year's International to the United States. A full account of the race and its meteorological aspects will appear in the *Monthly Weather Review*, for May, soon to be issued. The account will be written by Mr. V. E. Jakl, of the Drexel, Neb., aerological station, who was the Weather Bureau's representative at Milwaukee.—C. LeRoy Meisinger.

A recent press report says that Mr. Honeywell, who went 1060 kilometers, will be declared the winner of the race from Zurich.

Atmospheric Turbulence Over the Grand Canyon.

In June, 1921, during some flights over the Grand Canyon, Lieut. Alexander Pearson of the Air Service reports encountering upward currents of heated air over the Canyon walls on a calm day. He looked in vain for descending currents over the central portion. None should have been found, since the upward flow on valley walls is owing to the general expansion of the air in the valley as well as to local decrease in density of the air in contact with the sunlit walls. On a windy day, there was considerable general bumpiness, but no more in evidence over the canyon than over the plateau surfaces. (See *Aviation*, Aug. 29, 1921, p. 255.) A flight into the canyon in February, 1919, and rough conditions with cross-canyon winds are described in the *Monthly Weather Review*, Aug., 1919, p. 527. (Cf. "Bumpy flying conditions along the Atlantic coast," by A. W. Parkes, *Mo. Wea. Rev.*, May, 1922, 50:250-251.)—C. F. B.