Surgeon Parke on Vaccination.

At the great banquet of welcome given in London to Surgeon Parke, he briefly referred to the inestimable benefit of vaccination. Before the expedition started for Africa, says the *Medical News*, he vaccinated nearly every man in Stanley's little army, with the result that when they were surrounded by small-pox there were only four cases among the members of the expedition, none of which proved fatal. But among the camp-followers and irregulars, who had not been vaccinated, small-pox was almost universal, and large numbers of them died. It is probable that without the precaution of vaccination the expedition would never have had strength to complete the march across Africa.

LETTERS TO THE EDITOR.

**** *Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

Wind-Systems.

THE remarks on the general wind-systems of the globe on page 80 of *Science* for Aug. 8 are interesting. I have been securing from various mathematicians and meteorologists numerical statements of the deflective force of the earth's rotation on moving bodies on its surface. No two such statements thus far secured agree with each other or correspond with the deflection of air-currents actually depicted on the weather maps. As I understand the communication above mentioned, there is substantial agreement on the basis of the reasonings there presented that there is neither eastward nor westward movement of the atmosphere at latitude 35° 16′. It is true that the south Atlantic anti-cyclone is located at nearly this latitude, and is quite persistent. But the other anti-cyclones of the northern hemisphere, with reference to which alone we have full information, are not located at this latitude. On the contrary, they form a belt, not about the geographical pole, but about a point situated twenty degrees from it at longitude 96° west. In consequence of this displacement the centre of this belt is found as far north as 55° in the eastern hemisphere. Moreover, the separate anti-cyclones constituting it have a decided tendency to move eastward. Even the south Atlantic anti-cyclone pushes eastward not unfrequently at all seasons, and either fragments are detached from it or it moves bodily across Europe. At certain seasons this easterly movement of anti-cyclones is rapid, and at times appears to be independent of surrounding cyclones. This would seem to be a feature of the circulation of the atmosphere that is not consistent with the assumption that there is absence of eastward or westward movement at latitude 35° 16′.

M. A. VEEDER.

Lyons, N.Y., Aug. 18.

On the Lack of the Distance-Sense in Prairie-Dogs.

SEVERAL individuals of various ages under observation at Cornell University walked off chairs, tables, and window-sills with nearly equal absence of hesitation. This deficiency of a faculty which is so conspicuous with squirrels and some other rodents may be ascribed to the nature of their usual habitat, a plain, in which the only sharp inequalities may be the burrows and mounds of their own making.

One adult female, however, has manifested an immunity from the ill effects of falls which is not easily accounted for, and may be worthy of record. When about three years old it fell down a shaft upon the wooden top of an elevator 6.6 metres (21.6 feet) below. For a few minutes it remained nearly motionless, as if stunned, but gradually revived and completely recovered. On the 14th of July, 1890, at the age of 7½ it fell an equal distance from a window-sill upon a broad granite step. On looking out, it could not be seen; closer inspection revealed a single spot of blood, and, at the foot of the steps, a hole into which, presumably, it had crept, and from which, four days later, it was coaxed, a little wild but apparently uninjured. These two survivals are notable in view of the peculiarly solid and "chunky" form of the animal, and the improbability that such accidents should occur in a wild state. By allowing it to fall into water or upon soft material it is intended to observe the attitude during descent. The sense of distance may be cultivated. The brains of prairie-dogs will be compared with those of squirrels.

The subject of this note is 30 centimetres (12 inches) long, the tail contributing 6 centimetres; it is fat, and weighs 755 grams (26.6 ounces); the writer does not know the ordinary size and weight. It is friendly to all, but recognizes familiar voices and hands; is practically omnivorous, drinks milk, and has killed and devoured a ruffed grouse. Like all of the species, to a sudden sound, the fall of an object, a rap on the door, the voice, a cough, and particularly a sneeze, it responds by erecting the body and barking. The nervous mechanism involved seems to be largely reflex, rapidly exhausted, but nearly or quite uncontrollable; indeed, there is reason to believe that the second fall was due to an unguarded erection of the body at the edge of the window-sill; the bark was heard at the striking of a large clock in the same tower, and when the occupant of the room turned the dog had disappeared. Do any other animals display this reflex responsiveness to sounds?

As a slight contribution to the mechanism of dreams it may be added that the second fall and disappearance occurred during the writer's absence; that he is much attached to the prairie-dog, and promptly sent directions to search for it, urging that the steps should be removed if necessary; and that the following night he dreamed of superintending the demolition of McGraw Hall; finally that neither to him nor to any others connected with the university did their appear any incongruity in the destruction of a fifty-thousand-dollar stone building for the recovery of a prairie-dog.

BURT G. WILDER, M.D.

Ithaca, N.Y., Aug. 16.

Ballooning of Spiders.

MCCOOK'S great work on "American Spiders," whilst properly rejecting some proposed explanations of their aeronautics, does not offer any better explanation, but merely speaks of ascending air-currents, and gives important observations which show that the point of departure is an exposed rail fence or other elevated place in sunshine. I would suggest that the explanation is to be found in the fact that sunshine on such departure-platforms causes an upward current by heating and rarifying the air, and so starts the flight; and when (often after several vain attempts) the gossamer-line is at length sent aloft, the sunshine on the line litself will warm and rarify the surrounding lamina of air, and so increase the ascending current as to carry upwards both the filament and the suspended spider. For this last point I am indebted to Professor C. S. Young.

If these suggestions be good, then the interesting aeronautics may be expected to occur only during sunshine, and the term "ballooning" will not be entirely metaphorical, save in the sense that the rarified gas is outside instead of inside the silk mechanism.

F. MACLOSKIE.

Princeton College, N.J., Aug. 18.

AMONG THE PUBLISHERS.

THE index for the September number of the *Chautauquan* shows the following inviting subjects: "On the Nature and Value of Folk Lore," by L. J. Vance; "Sacred Trees," by Dr. Ferd. Adalb. Junker von Langegg; "The Supreme Court of the United States," by Eugene L. Didier; "Experiment Stations: What is an Investigation?" by Byron D. Halsted, Sc.D.; and "Modern Magic and its Explanation," by Marcus Benjamin, Ph.D.

—E. & F. N. Spon announce a treatise on "Water Supply, Drainage, and Sanitary Appliances of Residences," including lifting machinery, and lighting and cooking apparatus, by Frederick Colyer; "Sewage Disposal," being fourteen years' experience in works of intermittent downward filtration, separately and in combination with surface irrigation, with notes on the practice and results of sewage farming, by J. Bailey Denton (second edi-