A vote of thanks to the President was proposed by Colonel Fullerton, seconded by Mr. E. P. Frost, and carried unanimously.

The Santos Dumont No. XIV.

In the notes of the July number of this Journal mention was made of the latest navigable balloon evolved by M. Santos Dumont, the number XIV. With pleasure we now have to record that the new airship has been successfully navigated at Tronville by the ever persevering Brazilian inventor It is stated that its stability and dirigeability have been most satisfactorily tested in an ascent over the sea. In the previous notice, to which reference has been made above, some details as to dimensions, capacity, and motive power will be found. To these it may be now added that in the present airship the propeller is situated well forward, near the motor, and the balloon is drawn along rather than propelled by it.

Obituary.

MR. F. J. STRINGFELLOW.

We regret to record the death of Mr. F. J. Stringfellow, one of the early workers on the adaptation of the aëroplane to aërial navigation. His aëroplane and steam engine were exhibited at the exhibition organised by the Aëronautical Society of Great Britain in 1868, and the prize of £100 was awarded to him for his "engine and boiler of one-horse power."*

Several pieces of aërial apparatus devised by Mr. Stringfellow, and of distinct historical interest, are in existence and in the possession of his family.

Letter to the Editor.

THE SOARING FLIGHT OF BIRDS.

To the Editor, AËRONAUTICAL JOURNAL.

SIR,—I have never seen an account of the particular wing-action described in this communication, so perhaps it may not be generally known, in which case the following particulars may be of interest to those who make a study of the soaring or gliding flight of birds.

It is a remarkable fact that the best place to study the wing-action of sea birds of the gull tribe should be in the middle of the largest town in the world; and some years ago, when the Thames Embankment was not so frequented as it is at present, I occasionally spent a quiet, almost solitary, half-hour on a winter's day watching the graceful flight of these birds. On several such occasions I noticed that previous to a bird making the alteration of wing angle, or surface, necessary for an abrupt change in the direction of its flight, there would be a preliminary elevation and return of the posterior edge of both wings when a dive followed, or of the inside wing only when a sharp turn was about to be made.

This action, which would best be described as a "flick," or "twitch," did not affect the tips of the wings, and was very rapid and of limited extent, vertically; and the edge of the wing always returned to its normal position before the further movement of the wings necessary for the dive or turn, which the bird was about to make.

This curious wing-action does not appear to be confined to the gull tribe, for a few days ago, while I was making an optical experiment, a house-marten unexpectedly came into the field of view, gliding directly towards me. It was but a few yards distant, and was clearly silhouetted against the sky when it made this rapid movement of the posterior edges of its wings, followed by a dive. The action was precisely similar to what I had previously observed in the case of the gulls, and being quite unexpected and unlooked for was rather a surprise, for, had I given the matter any consideration, I should have been inclined to question the possibility of seeing it in the case of so small a bird.

This wing-action is in no way a part of the alteration of wing angle, or surface, although it is evidently a necessary preliminary to it, for the two actions are separated by a distinct though very brief interval of time. In appearance it is very like the rapid opening and closing of a hinged valve. I have always considered its function to be to allow the escape of the air eddy, or air cushion, formed by the concave under surface of the wing. If it were merely a part of the operation of altering the wing angle, or surface, there appears to be no reason why the edge of the wing should return to its normal position after its upward motion.

I may add that I have never observed this wing-action unless preceding a sharp change of direction of flight; and that it may best be observed when the bird is moving directly towards the observer, although it can be seen when the bird is moving in other directions if close enough. I shall be glad to know if others have observed this action, and if they attribute to it the same purpose as quoted above.

ELTHAM, W. G.
16*th August*, 1905.

Notes.

The Forthcoming Milan Exhibition.—The Executive of the International Exhibition to be held at Milan, in 1906, in commemoration of the opening of the Simplon Tunnel are

* Accounts recently published have given the figures as ½ horse-power, but the above statement is quoted from the minutes of the Society, July 3rd, 1868.