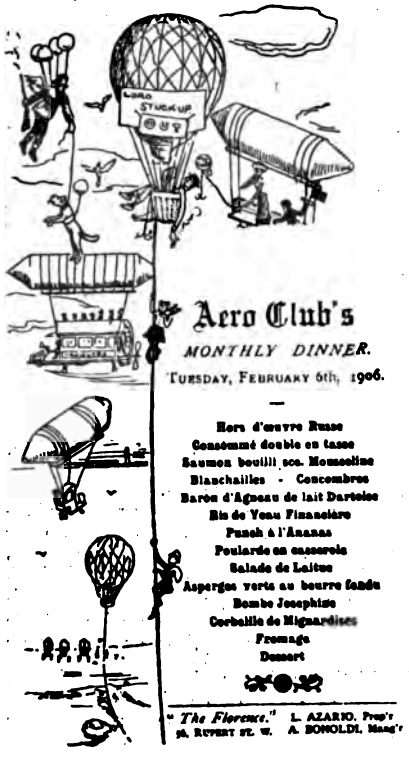
AERONAUTICS.

The Aero Club Dines.

COMMENCING with February, the Aero Club of Great Britain and Ireland have instituted regular monthly dinners, where it is hoped the interests of the movement will be considerably helped, as discussions naturally follow the banquets and new recruits are enrolled. The first dinner took place on February 6th, and we reproduce the humorous menu used for the occasion. Amongst those present were the chairman, Mr. Roger W. Wallace, K.C.; Professor Huntington, of King's College; Colonel Capper, C.B., R.E., Director of Military Ballooning; the Hon. C. S. Rolls; Mr. T. C. Aveling, of the Midland Automobile Club; Mr. Patrick Alexander; Mr. Frank Butler; and also Messrs. Pollock and Dale, who recently crossed the Channel in the club balloon.



Humorous Menu Card of the First Monthly Dinner of the Aero Club.

Flying Machine Experiments at Aldershot.

IT will come as a pleasant surprise to many people in this country interested in the problems of aeronautics, to find that the experiments which the military authorities at Aldershot have been carrying out recently, go a great deal further, and are of a more interesting character, than the mere tests of Mr. Cody's man-lifting kites, to which we recently referred. In fact, a large number of instructive gliding experiments appear to have been conducted under the supervision of Mr. Cody and Col. Templer, who is the moving spirit both of the Military Ballooning and Aeronautical Departments, and of the employment of mechanical traction for army purposes. An apparatus has been constructed, we understand, very similar to, if not identical with, the Wrights' aeroplane, which in Aldershot is known by the general nickname of "The Glider." It consists, that is to say, of two superposed aerocurves with guiding appliances, and, as in the Wrights' aeroplane, the aeronaut lies prone in the middle of the lower wing. This apparatus has been taken up by kites, and released at heights of as much as 500 ft., when long and thoroughly successful glides have been carried out with it, Mr. Cody in one case making a record glide of as much as half a mile, while a number of the engineers have also experimented with it, and, though not travelling distances as great, have manipulated it perfectly, and in every instance come to the ground without damage or injury of any kind. The "Glider" has not, of course, always been taken up as high as 500 ft., but in some cases, presumably with suitable opposing winds, experiments of, we believe, a not less successful character have been made from the tops of hills.

A Credit to the British Army.

EXPERIENCE and practice in controlling the gliding machine is, as we have always pointed out, most important, if not absolutely indispensable, for acquiring the necessary dexterity, skill, and self-possession for managing the motor-driven flying machine. It is most satisfactory to learn that the special department of the British Army, which concerns itself with such matters, has been plodding steadily along, and making real and substantial progress. To have a number of engineers who have executed free glides in this way, is to have a body of men who will be far ahead of any other experimenters, and probably be able to learn, with much less difficulty than anybody else, the mysteries involved in managing the flying machine of the future. While there has been a lot of talking and writing by people who have done nothing of a practical kind, here we have the British Army working away silently and unobtrusively, without attracting any public attention, in the way best calculated to lead to an ultimate solution of the flying problem. In fact, these Aldershot experiments are, as far as we are at present able to judge, ahead of anything that has been accomplished except by the Wright Brothers, and would seem to be even as good and as triumphant as anything which they had accomplished prior to the autumn of 1903. Of course, with a controllable machine it is probably not so difficult a feat to glide half a mile from a height of 500 feet, as it was in the Wrights' case to glide 300 yards from the top of a sand hillock. It may not necessarily involve quite such complete mastery of the machine, but it does show that effective mastery has been attained. In fact, that is effectively shown even by the shorter glides. A man who can keep an aeroplane of this kind from turning turtle and coming to the ground with a crash, will not, we fancy, be very long in learning how to control a motor-driven machine.

To Avoid Breaking Bones.

VARIOUS proposals have been put forward as regards suitable sites for gliding experiments. M. Archdeacon, in France, it will be remembered, regarded the sand dunes of Berck-sur-Mer, near Boulogne, as the most ideal spot with which he was acquainted. We ourselves suggested the South Downs (particularly in the neighbourhood of Worthing) and now Lord Montagu observes that he is the proprietor of 6 miles (? 6 square miles) of the softest mud on the Solent, covered with a few inches of water when the tide is up, and this he thinks would furnish an ideal experimenting ground, since however forcibly the experimenting aeronaut descends into it, he can hardly be seriously hurt. This is no doubt the case, and probably the experimenter will escape fracture of any of his limbs. But if he descends from 40 or 50 ft. in the air head first into Lord Montagu's soft mud, it is a very doubtful question whether he can be extracted even by the most enthusiastic assistants before suffocation has put an end to his experimenting further, even if the said assistants could get at him without being swallowed up in the nice soft mud themselves.

On the whole we rather suspect Lord Montagu of having a little fun with ourselves and others who have been enthusiastic on aeronautical topics. It is perhaps his delicate way of pointing out that the *place* where experiments are conducted is not of so much importance as the *way* in which they are carried out.

Official Recognition of the Lebaudy Airship.

THE Lebaudy airship has for a long time been, *de facto*, a part of the military equipment of France, and now the full formalities have taken place, and the position of the airship among the defences of the country has been formally recognised by the military authorities.

The Military Aspects of the Situation.

AT the same time, as we have already chronicled, the Brothers Lebaudy are constructing another airship on almost identically the same lines as the great machine now reposing at Toul. If anything, it will be slightly larger and more powerful, though not much, and the French Government has already contracted to take delivery of it on its completion, which, it is anticipated, will be within about six months from the present date. The French Government obviously has in view a programme which will have the effect of providing each of the great frontier camps and principal fortresses with one of these splendid scouting appliances. If ever war takes place on the French frontier, there can be little doubt that admirable service will be rendered by these vastly improved "eyes of the army," and that the first series of actions will be, to some slight extent, similar to the battle of the air foreshadowed in Mr. H. G. Wells' "Anticipations," to which we have frequently alluded. It will not be quite the same, for the French airships will, as far as can be judged at present, have it all their own way, the possible enemy across the Rhine not having, so far as is known, distinguished himself in the conquest of the atmosphere. The situation, as it exists at present, is a triumph for French technology. No other people seem to be able to build airships of the navigable balloon type that will hold their gas for a sufficient time to be practicable, and be thoroughly manœuvrable at the same time, whilst developing a speed of practical utility.

1907 Developments.

M. JULLIOT, the able and universally famous constructor of the Lebaudy airships, is getting out a new model to surprise the world in 1907. It is to be more powerful and considerably speedier than the present "Lebaudy," and alterations in the arrangements of the firm are being organised in connection with it. Hitherto, as our readers are aware, the whole of the airships have been constructed at Moisson. In future, however, the mechanical portions, *i.e.*, the hull, the motor, the propellers, &c., are to be built in Paris in the workshops attached to the Lebaudy sugar refinery in the Rue de Flanders. The gas-vessel is to be constructed, and the final assemblage of the airship is to take place, at Moisson.

A Similar Machine for Great Britain.

THE enthusiastic aerial department at Aldershot, to whose experiments in aeroplanes we have drawn attention above, is also arranging to build a machine, on what may be regarded as the Lebaudy lines, for military purposes in this country. The British airship will be an imposing affair, the gas vessel being 132 feet in length and 25 feet in diameter with conical ends, and will contain some 70,000 cubic feet of hydrogen. It will have a lifting capacity of over 3 tons. The skin of the gas-vessel is to be made of a number of layers of gold-beaters' skin, which, it is said, will be particularly able to withstand any tendency to cracking or tearing. The hull, which is more like the Santos-Dumont type than that of the Lebaudy airship, is to be provided with motors developing 40 h.p., and these will drive propellers at both ends, while the tests already made lead to the conclusion that a speed of 25 miles an hour will be attainable.

The race towards perfection between the navigable balloon type of machine and the aeroplane, which people living at the present day are privileged to witness, is probably the most interesting competition in the development of man's control over the forces of nature which the world has yet seen.

More Doubtful Methods.

WE last week reproduced a photograph of the Hamilton aeroplane, which has given such a sorry account of itself on the Florida Beach, and pointed out some of the reasons which, in our opinion, were among the causes of its want of success. A little previously we referred to the experiments of Mr. Ellehommer in Denmark, and M. Vuina near Montesson. From information which we had received in regard to the performances of the Danish experimenter, we believed, and stated, that he had actually executed free flight through the atmosphere, even though only for a distance of 50 metres. Since then further details of his machine have come to light, and, though we would not like absolutely to deny the possibility of its having left the ground for a short distance, we feel quite convinced that a machine of this type is not at all likely to accomplish sustained satisfactory free flight. It consists essentially of a central arch of canvas, or similar material, on either side of which are stretched two big wings. A propeller is mounted in front of the arch, where it is supposed to develop the necessary propulsive force, and the whole arrangement is mounted on quadricycle wheels. That this arrangement could succeed in carrying an aeronaut on a quadricycle any distance, we find it difficult to persuade ourselves to believe, as also that it could be successfully manipulated in the air for any length of time.

We may in general make the same observations in regard to the Vuina machine, which also simply consists of a quadricycle with motor and propelling mechanism and large wings, the shape of which suggests a cross between a bat and an ordinary umbrella.

The chief difficulty with constructions of this kind is that the prospects of attaining real rigidity with the wings are more than problematical. In the Wright and Chanute type of machine the two surfaces or aerocurves are tied and strutted together, and the whole produces a compact and rigid structure. Not so with the expanded bird-like wings. To give them anything like the same degree of rigidity, a complicated system of vertical rods and ties extending above and below the wings appears an absolute necessity, and that is handicapping the machine most seriously.

Twenty Years' Horseless Carriages.

ON Wednesday last a very interesting paper on "The Horseless Carriage, 1885–1905," with numberless illustrations, was read by Mr. Claude Johnson, at the Society of Arts, John Street, Adelphi, W.C. The chair was taken by Colonel H. C. L. Holden, R.A., F.R.S., who is a member of the Council of the Society.

MOTOR BOATING.

A Club Launch.

IN connection with the Motor Yacht Club floating club house, a sea-going pinnace, by Messrs. Thornycroft, is to be regularly employed in maintaining constant communication with the shore. The launch will be mahogany built, 30 ft. in length, with 6 ft. beam, and will draw 2 ft. 10 in. of water. The engine will be a 4-cylinder, 4¼ by 5, 24–30-h.p., low-tension magneto ignition, and a cabin, 6 ft. 6 in., with a head room of 5 ft., will be fixed, having glass sides, so that passengers in wet weather will not be discomfited.

The Johore Cup.

A CUP, to be raced for during the coming season, has been presented to the Motor Yacht Club by the Sultan of Johore.

International Cup Race.

ENTRIES for this race—which will probably be held off Cowes during August—will close on July 1.

British Motor Boat Club.

THE new burgee of the British Motor Boat Club, which is quite different from any published in Lloyd's Yacht Register, is blue with a red St. Andrew's Cross (diagonal cross) with a white border.

The racing fixtures for this season will probably be, June 5th, Oulton Broad; June 8th and 9th, Liverpool; a date in July at Cowes, in Cowes Week in August, and at Burnham in early September.

Armour-Clad Cars.

THE idea of armouring motor cars for military purposes, which was first, we believe, proposed in this country by the notorious E. J. Pennington in the early days of automobilism, and subsequently brought up again by Mr. F. R. Simms, a description of whose machine appeared in THE AUTOMOTOR JOURNAL for the 19th April, 1902, would seem to be coming to the front again. Possibly it is the revolutionary state of affairs prevailing in Russia which has provoked this return to the militarisation of the automobile. At any rate, Messrs. Charron, Girardot, and Voigt, have just completed the first of a number of such vehicles for the Russian Government who have, doubtless, at present good cause to require their services, and another similar arrangement, constructed by the Opel-Darracq Company, was exhibited by that Company at the recent Berlin Automobile Exhibition. We, this week, reproduce a photograph of the C.G.V. machine, and draw attention to its leading characteristics in the title. The Opel-Darracq military automobile is an ordinary 4-cylinder touring car, developing 40 h.p., and is armour-plated, or, at any rate, provided with bullet-proof plates to reach above the heads of the occupants. These can be removed, and the car employed as an ordinary touring car if needed. Its total weight, when fully armoured and provided with its guns, amounts to 2,400 kilogs., in which condition it is said to be capable of developing a speed of 40 kiloms. per hour. The armament of the car consists of two Mauser quick-firers and two Mauser quick-firing pistols. The car is also equipped with a telescope on a stand.

Railway Motor Coach Privileges.

ONE is compelled to wonder what is happening to the Board of Trade in its hoary old age, unless it be a most spasmodic rejuvenation under its new head. For the six new rail motor cars which the Great Northern Railway have been adding to their stock are actually to be allowed to run on the rails and stop at intermediate spots where there are no stations. It will be a great convenience to the local population, no doubt, but the most encouraging feature of the situation is the extraordinary revolution of ideas at the Board of Trade, of which the granting of such a concession is evidence.

A Side-Slip Catastrophe.

WHEN motor omnibuses were first put on the London streets, shod with solid rubber tyres, many people, realising their huge weight and the number of times they would have to be stopped, turned, and otherwise manœuvred on streets often so slippery that the London cab horse, in spite of his many years of practice, can only keep his footing upon them when encouraged by "strange oaths," predicted that motor 'buses would be slithering about the Metropolis like a herd of hippopotami on an ice skating rink. The prophets of evil have in this, as in so many other cases, been utterly out of it, and the motor omnibus has surprised its patrons quite as much by its absence of side-slippiness as by its high average speed, controllability, and perfect genius for picking its way through crowded traffic. One of the first, if not the first, motor 'bus side-slip accident, which has resulted in a coroner's inquest, is an occasion, therefore, of very particular interest, and so are both the coroner's remarks and the verdict of the jury. The victim of the accident on whom the coroner's jury "sat" came by his end through being knocked over by the 'bus, just as he was alighting from it. A van—in this case, as in so many, the *fons et origo mali*—pulled up sharp in front of the 'bus, as they not infrequently do. The 'bus driver, to prevent a collision, clapped on his brakes, and the 'bus in consequence skidded, throwing off a passenger who was standing on the steps, and who in consequence suffered injuries to which he succumbed. The coroner, in summing up the case, made the general statement that all vehicles were liable to side-slip, but the way in which the side-slip occurred in a motor omnibus was more serious than in a horse-drawn omnibus, and added some remarks about sufficient being known regarding the tendency to side-slip to make the responsibility of motor 'bus drivers a very serious one. "They were bound," he said, "to know that a skid might occur, and the consequences might be serious injury to human beings, though in this case it could not be maintained that there was anything like serious neglect." The jury returned a verdict of "accidental death." That horse-drawn vehicles do not enjoy the comparative immunity from skidding apparently claimed for them by the coroner, was, however, pretty well illustrated recently at Surbiton. The local fire-engine was summoned to the Assembly Rooms, and the brigade, with the horse-drawn "steamer," proceeded to the scene of the conflagration at the usual high speed. Suddenly the wheel of the vehicle skidded on a tramway line, and horses and vehicle dashed in consequence into a stone wall surrounding a garden. The front of the fire-engine was smashed and the poor horses were injured, one of the firemen also sustaining slight injuries. And the fire brigade was the victim of a false alarm all the time.