EUROPE to AMERICA by AEROPLANE in 30 HOURS

CLAUDE GRAHAM-WHITE

"I'LL cross the Atlantic in thirty hours," said Claude Grahame-White, the aviator, and named next summer as the time when he would make good his promise.

He might have said: "I will tempt all the terrors of the unknown. I will accomplish what has never been tried. I will risk my skill against the elements and win. I will take to myself the swiftness of the meteor and the sureness of the seagull. I will defy time, the wind, the weather, the trackless wastes of the sky and the ocean. I will make real the dream of the dreamer."

But Grahame-White is a true Briton and as such has a hearty dislike for the grandiloquent. He is quite content with: "I'll cross the Atlantic in thirty hours"—as if the feat were the most matter-of-fact performance in the world—and the chances are that he regards it a good deal in that light.

At first hearing, it sounds like an idle boast, but those who have followed the career of this eminently shrewd, clear-headed and capable airman know that he is neither a boaster nor a visionary. If he says he will do a thing it is certain that he believes firmly that he can—and believes it because he has studied his facts and tested his theories.

It is but a short look back to the beginnings of the aeroplane and in the brief time that that wonderful machine has been in the hands of men it has performed the very things that skeptics have declared impossible. It seems almost certain that at a time not remote someone will make the perilous trip overseas. And why not Grahame-White?

To the average earth-man who is satisfied never to rise above the top stories of an office building the attempt, even under the best of conditions, appears reckless to the point of foolhardiness. Not so to the aviator. "Give me the kind of a machine I'm thinking of," he remarks, "and the transatlantic trip would be just so much duration flying—plain sailing."

Just there lies the nub of the question of air navigation from Europe to America—in the machines. They must first of all have speed, great speed; they must have a lifting capacity enough to carry the required amount of fuel, they must have motors capable of standing the strain of terrific and stupendous distance, they must have instruments that will locate the course with accuracy.

All those elements must have been considered long and carefully by Grahame-White before he made his recent announcement. He must be satisfied that he has an aeroplane that fulfils all the conditions. So far, little detail has leaked out as to the manner of equipment he will use. It is known only that he is building a machine which will carry four engines, arranged in independent pairs and each rated at 250 horsepower. He has said that he is convinced that he can show enough lifting capacity to carry the required fuel and enough speed to rush him to these shores in thirty hours.

That may seem simple to the unthinking, but consider. Roughly speaking, it is 3,000 miles from coast to coast and at Grahame-White's reckoning of thirty hours that means that he has a machine which he trusts for at least one hundred miles an hour, minute after minute without interruption.

What course he will choose has not yet developed. He has the whole great ocean to choose from. It has been hinted that the steamship lanes are the natural path for the adventurer to give some measure of protection in case of accidents. If he chooses that from Queenstown to Sandy Hook lightship he must traverse 2,800 miles; if from Plymouth to Sandy Hook, 2,962 miles; if from Southampton to Sandy Hook, 3,100; if from Havre to Sandy Hook, 3,170 miles; and if from Cherbourg, 3,644. The Mauretania has made the passage in four days ten hours and forty-one minutes. The aviator proposes to clip at one swoop 6,341 minutes from that record.

To be sure there are other roads which are said to be safer. There is that which leads from the Azores to the Bermudas, one that allows for two relatively short hops and a long one from mainland to mainland. Then there is that other one favored by those who have planned out the course not for an aeroplane but for a power dirigible.

This second course is practically the same over which Columbus was wafted across by the kindly trade winds centuries ago. From a meteorological standpoint it is said to be the best. It lies from Cadiz to Teneriffe, a distance of 807 miles; from Teneriffe to Porto Rico, a distance of 3,219 miles; from Porto Rico to Havana, distance of 1,124 miles; and thence to the mainland. The course lies in a zone varying little from twenty degrees north latitude and in the winter and spring offers fair weather and a wind with a velocity of fourteen to sixteen miles an hour.

The matter of wind, however, seems to have troubled Grahame-White little. It is probable that he will select one of the northerly courses and it is probable that he may fly even as far north as Labrador. By choosing that as a point of landing and Ireland as point of starting, he might reduce his distance by hundreds of miles.

Whatever his course, however, he must have speed. Even at his own estimate of thirty hours, the nervous strain of guiding an aeroplane for that length of time without sleep would be terrific and would increase immensely with every added hour.

Grahame-White has always been a believer in the speed possibilities of his air crafts. Some time ago he held that 100 miles an hour was no very remarkable rate. "Friends of mine," he said, "who are experts on the scientific aspects of airmanship, predict that eventually speeds of 200 miles and 300 miles an hour will be possible. At this, one's imagination is apt to reel, but this much is certain: If the flying machine is to become of real importance, and not remain always a sporting toy, it must be speedier than any method of transit on land."

Perhaps he is convinced that his new four-motor arrangement will give him 100 miles continuously. He must have that to make his journey in the time he has set. Jules Vedrines has flown at the rate of a trifle better than 105 miles an hour and George Fourny holds a record of fifteen hours of continuous flight. Nothing like a union of the two records has yet been known and if Grahame-White succeeds according to his promise he will have approached one and bettered the other.

It may seem strange, but to the aviator the matter of swiftness is a secondary consideration in the problem. To him the lifting power is the thing that counts. One prominent aviator figured the other day that on such a trip as Grahame-White plans he would under known conditions have to carry fuel amounting in weight to more than 4,000 pounds.

It is estimated that an average aeroplane motor with a speed capacity of sixty miles an hour will use on an average five gallons of gasoline an hour and one gallon of lubricating oil. Both these weigh approximately six pounds a gallon. Grahame-White is to have four motors and stay in the air thirty hours. The result is simple figuring.

The main difficulty, then, will be in producing an aeroplane which has the power to make a tremendous lift without materially reducing its speed. It is generally conceded that the type of airship used will be necessarily a biplane as the dainty monoplane is not a weight carrier. Even the biplane has not yet shown power of moving the tremendous weight which it is estimated the cross-seas adventurer must carry.

In France there is a record of a machine of this sort lifting thirteen people from the ground. That, however, was a mere hop and not a sustained flight. At best only 1,950 pounds of human freight was thus carried, if each person is allowed 150 pounds.

Whatever improvements Grahame-White may have in his new machine it is certain that he must have unusual lifting power even if he has discovered some means of cutting his oil and gasoline requirements. He will have to have a tremendous drive to overcome the drag of the weight in his storage tanks.

To achieve what he has set out to do he will have to secure a machine of a type superior to anything that has been so far seen in motor equipment, in strength, steadiness, and speed. His motors will have to better the continuous flight record by half, equal the speed record and beat the lifting record by long odds.

Granted, however, that he will have at his command a machine equal to all emergencies he will still have the ocean to cross. That in the estimation of the aviator is the least of his troubles. Philip W. Page, aviator, expert in the management of hydroplanes, and one of the foremost cross-water flyers, expressed the views of many of his fellow-airmen in discussing this phase of the proposed flight the other afternoon.

"Of course," he said, "there is a possibility of making a flight from continent to continent. Such a flight, however, presupposes an aeroplane theoretically perfect for the purpose. With such a machine the journey would be by no means as terrifying as most people imagine. If the aviator were sure of staying in the air and making the required speed, the rest under normal conditions would be one of the simplest kinds of flying—straightaway over an unimpeded course.

"Contrary to the general belief, he would have conditions better than those on land. The winds in the summer should be steady and never very strong. He would encounter no buildings, trees or abrupt changes in the face of the country to split his air currents. Almost any aviator will tell you that he prefers a forty-mile steady to a fifteen-mile puffy wind.

"The air-hole theory has come to be a good deal of a myth, but there are still troublesome up and down trends of the atmosphere which lend no little difficulty to land flying. These are caused in a large measure from sudden obstruction to air currents and from radiation.

"The atmosphere over the ocean is not subject to these obstructions nor is it affected by any such radiation as we meet with over land on a hot day. I should say that his difficulty would not lie primarily with atmospheric conditions, provided he had reasonably settled weather, but rather with the possible unsureness of his aeroplane, possible trouble with his motor and the intricacies of navigation."

Given fair weather and a machine which will make the speed he hopes, the actual physical demand upon Grahame-White would not be a severe one. The control of a machine running in steady currents would not be a trying one. Plain flying even at a great speed does not call for any very large amount of exertion.

On the other hand the nervous strain would be tremendous. It is hard to imagine the state of mind of a man hurled into the unknown with only a slender fabric of metal, wood and cloth between him and death. It is equally difficult to conceive of what thirty hours or more of catapulting across mile after mile of ocean at 100 miles an hour would mean. At the least it would necessitate a tension the like of which few men have ever experienced.

PENALTIES FOR TOMMY ATKINS.

How British Soldier Is Punished for Offenses in Time of War.

When a soldier proceeds on active service he has to mind his "p's" and "q's," for offenses which in peace time would be lightly punished may in the field render him liable to death, says London Tit-Bits. In time of peace, if Tommy Atkins, being on sentry go, sleeps or is drunk on his post or quits it without being properly relieved, he will probably get off with a short dose of imprisonment or perhaps of "detention" only. On active service the penalty for these offenses is death.

It would not usually be enforced nowadays, except for a repeated offense or where, owing to the prevalence of misbehavior among sentries, it is necessary to "make an example," but still the liability to death is there.

In peace the maximum penalty for desertion is two years' imprisonment, with or without hard labor, but in practice a first offense will get a short term of imprisonment. On active service the deserter takes the risk of death if recaptured and if the offense is committed actually in face of the enemy he will probably be shot.

Similarly, acts of insubordination which in the ordinary way would be comparatively venial offenses become punishable by death on active service. In passing it may be mentioned that even in peace an insubordinate soldier may be sentenced to death if convicted by a general court-martial on one or another of the following charges: Striking or using or offering any violence to his superior officer, being in the execution of his office; or disobeying, in such manner as to show a willful defiance of authority, any lawful command given personally by his superior officer in the execution of his office whether the same is given orally or in writing or by signal or otherwise.

In peace, however, the maximum penalty has not been inflicted for these offenses for many years.

Active service brings into being offenses which practically do not exist in peace. One of the most serious of crimes peculiar to active service is "forcing a safeguard." The commander of an invading army will often detach parties of his own men to protect the persons and property of civilian inhabitants from violence by his own side. To force such a safeguard almost invariably means death.

Breaking into a house or any other place in search of plunder may also mean death, even when there is no safeguard; but as a rule a lesser penalty would be inflicted. It depends a good deal on the commander. Some generals wink at looting; others—Lord Roberts, for one—are very severe on it.

During the Boer war more than one of our men was executed for the sake of a Boer fowl or bottle of "square-face." On one occasion only the readiness of an Irish "Tommy" saved him from the firing party or the gallows. He was caught with a couple of fowls under his coat and by no less a personage than "Bobs" himself, out riding with his staff.

Asked for an explanation, he instantly replied that he had caught the fowls running loose on the veldt and that, hearing the commander in chief was on short rations, he was on his way to ask his lordship to accept them as a present. The fowls and the explanation were accepted.

It is possible for a soldier to show cowardice in time of peace. In such a case he would probably be charged with an act or conduct "to the prejudice of good order and military discipline," sentenced to a stiff dose of imprisonment and to be "discharged with ignominy."

On active service any act of cowardice is punishable by death, while a soldier who, "in action or previously to going into action, uses words calculated to create unnecessary alarm or despondency," is liable to penal servitude.

Who carries out a sentence of death on active service? This is the duty of the provost-marshal, who, with a large force, is an officer of fairly high rank. He is responsible for making all arrangements for the execution and, if necesary, he must himself act as executioner. In the Boer war one provost-marshal was Major (now Colonel) R. M. Poore, the famous Hampshire cricketer.

A Natural Mistake.

"What do you suppose the financial editor has done?"

"What?"

"He has put the article called Stock Phrases under the head of Market Quotations."

Social Forms and Entertainments

A Conundrum Luncheon.

I am anxious to entertain for a school teacher who is coming to the city for a week's vacation. Can you suggest something to do at the table, something like "nuts to crack," only I do not want to do the questions up in walnut shells.—Rowena.

I should think this conundrum luncheon would be just what you want. For the centerpiece have a large interrogation point of small flowers—a tinsmith will make the form, which may be filled with sand and the flowers have the appearance of growing. The name cards should also be question marks cut from cardboard. Any color that you select should be carried out in the place cards and the covers of the little booklets which contain the conundrums. For ornamentation draw the figure of an owl sitting on the branch of a tree and a large interrogation point.

Specimens of the questions are given below, but, of course, you may have others you wish to add:

When is it easy to read in the woods? When autumn turns the leaves.

Why are the western prairies flat? Because the sun sets on them every night.

Which is the largest room in the world? Room for improvement.

When is a cup like a cat? When your teasin' it.

Why is it dangerous to walk abroad in the springtime? Because the grass is putting forth blades, every flower has a pistil, the trees are shooting and the bullrushes are out.

Why is a washerwoman the greatest traveler on record? Because she crosses the line and goes from pole to pole.

If you throw a stone that is white into the Red sea, what will it become? Wet.

What is the difference between a duck that has one wing and one that has two? Merely a difference of a pinion.

Why is a schoolboy being flogged like your eye? Because he's a pupil under the lash.

Why doesn't Sweden send her cattle abroad? Because she keeps her Stockholm.

What is the difference between a clock and a partnership? When a clock is wound up it goes; when a firm is wound up it stops.

What belongs to yourself and is used by your friends more than yourself? Your name.

What is the center of gravity? The 'etter V.

Pretty Party Gown.

Will you please suggest some inexpensive material for an evening dress, something to wear to the concert, the theater and such like? Would a fine quality of cotton crepe made up daintily be all right? I do not have occasion very often to wear such a dress, but when I do I need it. Would it be asking too much to ask you to suggest also some dainty way of making such a dress for a seventeen-year-old girl? I will watch the Sunday paper for your reply.—Nellie.

Instead of the cotton crepe I would suggest a marquisette of white over a white or colored silk slip made after any girlish pattern to be found in an up-to-date, reliable fashion magazine. You will find this very serviceable. Trim with lace and a dainty sash. I hope I am not too late. It was impossible to reply before.

Watch the Department.

I am much interested in your column in the Sunday paper and am coming to you for advice. Please print as soon as possible some games to be used at an evening party of young men and women. Are "charades" popular? Thanking you in advance.—Kitten.

If you will send me a self-addressed, stamped envelope in care of this paper I think I can put you in line to get some party amusement ideas. Charades are always good fun, either impromptu or planned beforehand. Glad you enjoy the column.

Acknowledging Reception Invitations.

Is an answer necessary when you are invited to a reception?—F. S.

The latest books on etiquette say that a card sent to arrive on the day of the reception should act as a "regret" and if you go no acceptance is required beforehand. I think, however, that it does no harm to send an acceptance or if you see the hostess tell her you expect to be there.

Placing the Wedding Ring.

Upon which finger should the wedding ring be placed?—Country Lass.

The finger next to the little one on the left hand is the one from time immemorial called the "wedding ring finger."

MADAME MERRI.

BEST FOR THE HAIR

Simple Shampoo Mixtures That Can Do No Harm.

Soap Jelly Mixed With Eggs Is Always the Staple—Blonde Tresses Frequently Require Special Treatment.

There are almost as many formulas printed for shampoo mixtures as for face creams. Some of these are excellent, and others possess no special cleansing properties, while some are positively injurious and should never be experimented with. Here are a few formulas selected from a long list, and we can select from them according to our special needs.

Three eggs lightly beaten with three tablespoons of warm water. Rub the mixture into the hair and on the scalp, taking pains to cleanse quite as thoroughly as though you were using a soap shampoo. More eggs can be used if necessary, but the proportion of water should be a tablespoon to each egg. If the odor of the eggs is unpleasant to you, a little toilet water can be put in a half pint of cold water and poured over the hair after the last rinsing.

An egg shampoo with soap jelly is sometimes more satisfactory than eggs alone, and the general rule is to use one teaspoonful of soap jelly to each egg, mixing them well; then fill a basin with two quarts of hot water, hold the head over it and suds the hair well with the egg mixture, using the water from the basin to assist in the cleansing; rinse in several waters and dry in the sun.

For blonde hair the following is advised: The whites of two eggs, four ounces of rose water, a half ounce alcohol and a level teaspoonful of powdered borax. Rub into the hair as you would any other shampoo, cleansing both hair and scalp, and rinse well in several waters.

A simple shampoo consists of a half cup of olive oil soap, a level teaspoonful of baking soda and a generous pint of hot water. Let stand till cold when it will be a soft jelly. Wet the hair first with warm water, and shampoo with the jelly.

For very oily, dirty hair, take a tablespoon of green soap and dissolve it in one pint of hot water by constant stirring. Add a half ounce of glycerine and an ounce of alcohol. This is excellent where there is thick dandruff, as it is very cleansing to the scalp.

White hair is said to be greatly benefitted by a shampoo composed of a small cup of shaved white soap in one and a half pints of boiling water, and when dissolved add a half pint of bay rum, a teaspoonful powdered borax and 20 grains bisulphate of quinine. Keep in a glass jar. A few drops of laundry bluing in the last rinse water will help to prevent the yellow streaks which spoil many an otherwise snowy "crown of glory."

No matter which shampoo mixture you select, remember that the secret of successful shampooing consists of thoroughness in the washing and in the rinsing also. Three times for the sudsing are none too many and the last rinsing should be very moderate. If the washing and rinsing are properly done, the hair will be soft, glossy and quickly dried. Carelessness in the cleansing process is responsible when the hair is sticky, hard to dry and hard to comb.

Artificial heat should not be used to dry the hair. Sunshine and fresh air are best and the hair will retain its health and vitality much longer if dried in the sun. A few moments' brisk brushing is good, but the hair should never be pulled or the scalp irritated.

Hannah.—Probably the fault with your figure is due to the fact that you do not keep your chest up in position. When the chest is held well up the shoulders remain in their natural position and a rounded back is not possible. Try lifting your chest up as if you were trying to bring it up to your chin, and do this whenever you think about it. Take a half dozen deep breaths also, several times a day, and you will be able to gradually overcome the tendency to drooping shoulders.

Jennie W. L.—A good, nourishing cream is necessary for the massage. Not only for its beneficial effect on the skin, but also to aid the fingers in their work, as the constant friction would be likely to cause irritation. Only the best cream should be used, and an excellent method is to follow the massage with a cloth dipped in quite cold water and held against the face for a few minutes, after which the skin should be gently patted dry.

New Reader.—Shampooing the hair cannot cause the least harm to either hair or scalp, no matter how frequently it is indulged in, provided the proper ingredients are used in the shampoo preparation. Once a week is not too often, if the hair gets very dirty and the scalp needs cleansing. A preparation which is strong enough to dry out the natural oil and make the hair dry and harsh should not be used even once a year. You are welcome to the formula for a good shampoo mixture.

Sophia.—Have you tried the quick cold sponge bath in the morning to help overcome the feeling of lassitude you complain of? I believe it will prove of immediate benefit. Ten minutes is sufficient time for the entire bath, with the brisk rubbing afterward, and I am sure you will find it just what you need.