

Aerial Navigation a Fact-- Von Zeppelin's Ship Flies.

The second trial of Count Zeppelin's colossal airship is described in press reports from Friedrichshafen as being a notable success. After rising to a height of about two thousand feet, the vessel remained poised at that level for three-quarters of an hour. It then made a series of tacks, and went through certain turning maneuvers, afterward traveling with the wind in what is described as "a generally circular direction" for about six miles, the velocity of the wind at this time being about eight miles an hour. It is said that later, in a freshening breeze, the air ship turned and "made head way" against the wind. Eventually the vessel descended with "great ease and steadiness to the lake," and was towed to its shelter. The stability and steering powers of the airship are described as being excellent.

If the above reports are correct, we still know as little about the actual practical value of Count Zeppelin's machines as we did before. It has been proved merely that an airship of this kind can ascend, maintain its equilibrium, and be navigated in any desired direction, provided the wind does not much exceed the strength of a gentle breeze. It has yet to be shown that in stronger winds, say from twenty to fifty miles an hour, this airship can perform the same evolutions. If it should show that it is



COUNT VON ZEPPELIN.

able to maintain a speed of, say, only twenty miles an hour against a strong wind, aerial navigation by the balloon type of airship will have an enormous stride in these closing days of the century. Enough has been accomplished to render the further trials of Count Zeppelin's costly and carefully thought out design a matter of world-wide interest.

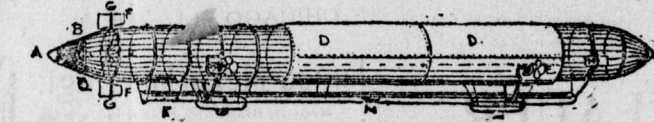
The idea upon which Count Von Zeppelin's success, so far attained, appears to be based, is that the envelope or outer portion of the balloon should be of such material as to hold the contained gas for as long a period as possible. The difficulty has not been the making of gas in great quantities nor the buoyant power of large volumes suitably contained, but its retention in the envelope or receiver. Acting upon this idea, the Count has produced a material which would hold the hydrogen, the buoyant element being the lightest substance known, for five weeks without appreciable loss.

The cigar-shaped envelope has a capacity of 11,000 cubic metres of this gas (one metre equal to 39.37 inches). The exterior of the balloon is covered with a protective surface of pegamoid and silk. The total weight of the ship and crew is estimated not to exceed 20,000 pounds. The ship when completed resembles a huge cigar, made chiefly of aluminium. It is 415 feet long, and the cylinder proper is forty feet in diameter. The total depth, including the gondolas in which the passengers sit, is about eighty feet.

The framework of this huge cylinder consists of aluminium bands, twenty-four in number. The interior of the cigar is divided by sixteen vertical ribs into seventeen compartments, each of which contains an independent balloon, made of a material which the manufacturer calls "ballonin." The first ascent was to have

it was seen that it was more than likely to be a success.

The motive power of the big airship is furnished by four screws or propellers attached to the sides of the cigar, actuated by two Daimler motors of fifteen horse-power each, and capable of turning at the rate of 1200 revolutions per minute. These propellers are made with blades of aluminium. The action of such propellers on air not being sufficiently well known to the inventor and his friends, various experiments had to be carried out with them. One of these was to attach them to a boat resting on the water of Lake Constance and set them



DESIGN OF ZEPPELIN'S AIRSHIP.

A A Aluminium points; length, from A to A, 415 feet.
B B A ring with spokes similar to those of a bicycle wheel.
C C Compartments or balloons.
D D Portions of the outer covering.

started. I had steered the airship around and was heading directly for this pontoon, when, in coming down somewhat from the elevation we had been floating at, the gas began to escape from one of the balloons.

"This threw the point of the airship much lower than I was prepared for, and our descent became too rapid. I threw out some ballast and worked the rudder that changes the air ship's plane and direction, but it was of no use. The machine had too great an impetus, and the descent was unavoidable."

Opinion in general is somewhat unsettled. Of course, the decisive trial has not yet been made, for the machine is still in the experimental stage, though an undoubted step toward the achievement of aerial flight has been made.

How characteristic of this fighting age it is that the moment it seems likely that the upper air has been made accessible to mankind the first questions asked are: How can we get

up there and fight? Shall we be able to drop dynamite and lyddite from the skies upon the ships and cities of our enemies?

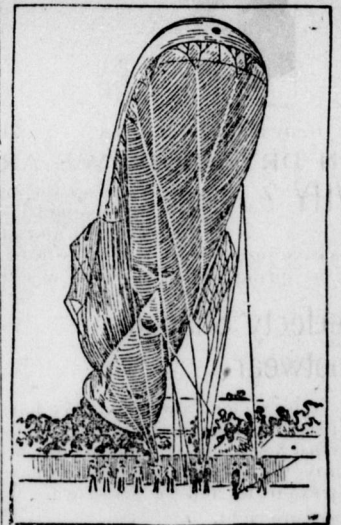
Zeppelin has without doubt filled France with new hopes and England with new fears. An invasion of Britain by airships appears as a distinct possibility. The battle of Dorking may be fought in the clouds, and "perfidious Albion" may cease to "rule the waves" by reason of her failure to rule the atmosphere. On the other hand, a second successful siege of Paris may be made impossible by the airship's aid in bringing new supplies of food to its defenders.

The Modern Scientist.

In the olden times, said Professor Rhys in a recent address before the British Association, a scientist, after once printing his views on a given subject, stuck to them through thick and thin, or, at most, limited himself to changing the place of a comma or replacing an occasional and by a but. "In this way not a few great questions affecting no inconsiderable portions of the universe had been forever set at rest," and a large portion of the remainder of the scientist's life was frequently devoted to defending his theories. "All that has been changed and what now happens is somewhat as follows: A B makes an experiment or propounds what he calls a working hypothesis; but no sooner has A B done so than C D, who is engaged in the same sort of research, proceeds to improve on A B. This, instead of impelling A B to rush after C D with all kinds of epithets and insinuations that his character is deficient in all the ordinary virtues of man, only makes him go to work again and see whether he cannot improve on C D's results, and most likely he succeeds, for one discovery leads to another. It is a severe discipline, in which all display of feeling is considered bad form. Of course every now and then a spirit of the ruder kind discards the rules of the game and attracts attention by having fits of bad temper. But generally speaking, the rivalry goes on quietly enough to the verge of monotony, with the net result that the stock of knowledge is increased."

Kite and Balloon.

A feature of the recent German maneuvers was the use of the signal balloon for the transmission of orders.



THE AIRSHIP BEGINNING ITS FLIGHT.

in most perfect order on the first ascent.

One of the two rudders below the machine, at the stern, would not work freely. Thus, instead of moving parallel with each other, the rudders frequently formed an angle.

This defect hampered Count von Zeppelin very much indeed.

It is to this fault that he attributes the general movement noticed in the trial toward the left, for at no time did the machine make a decided flight to the right.

The Count also remarked that his de-



FOR THE HOUSEWIFE

Monstrosities in Lamps.
All sorts of monstrosities are to be found in lamps. There are all kinds of strange designs to put into them, more, perhaps, than into any one other article made for real use.

Pale Green Enamel.
Time was when white enamel, or rose enamel, or pale blue, was desired in bedroom sets. The green wicker chairs and lounges and green enamel bedroom sets are now in request. It is a pale willow green, cool looking and very pretty. It is easier to keep such furniture in order than when it is pure white. It is not desirable to have any touch of gliding added. The green chiffonier is a pretty piece of furniture.

Care of Linens.
Linens that have been stained by tea or coffee may be cleansed by moistening the spots with water and holding them over the fumes of a small piece of burning sulphur, or a few sulphur matches. Wash immediately with water in which a little ammonia or soda has been dissolved. Stains that nothing else will remove are often taken out by the vapor arising from burning sulphur, but the material must be washed thoroughly at once.

Using the Odds and Ends.
"Never waste anything" is the advice that greets the housekeeper on all sides. Suet and drippings have their use. Bits of meats and odds and ends of vegetables are over-flowing with edible possibilities, and even stale cake may be made into something more appetizing than cabinet pudding, although cabinet pudding is wonderfully good when proper care and expense are bestowed in the making. The truth is that good cookery can never be extremely plain and inexpensive. The woman who wonders why some one else's hashes and stews and made-overs are delicious, while hers are not, will generally find that she needs to cultivate a more lavish hand when it comes to butter or milk or something in the seasoning line. To make a very good pudding from stale pieces of cake, begin by well buttering a mould that will contain one quart. Add a few raisins and currants and nut meats. Now put in the small pieces of cake with some more raisins and currants until the mould is nearly full. Beat two eggs until quite light, then add to them two cups of milk, a heaping tablespoonful of sugar and a pinch of salt and pour over the cake. Cover the mould and put it in boiling water to cook, being careful that the water does not reach to the top of the mould and so get inside to the pudding. Boil for one hour. When served hot with a fruit sauce this makes a really good dessert. In fact stale cake has many dishes invented for the sole purpose of taking care of it that far surpass first-hand dishes of less richness.



Household Recipes

Oak Hill Potatoes—Cut four cold boiled potatoes and five hard boiled eggs in one-fourth-inch slices. Put layer of potatoes in buttered baking dish, sprinkle with salt and pepper, cover with layer of eggs. Repeat, and pour over two cups thin white sauce. Cover with buttered cracker crumbs and bake until crumbs are brown.

Mayonnaise Eggs—Boil five or six eggs half an hour, cut in halves lengthwise, put whites aside in pairs. Rub yolks through a colander and work to a smooth paste with mayonnaise dressing. Fill the whites and press the halves together. Stand the eggs upon a plate with cross, stand the eggs upon it, surround with overlapping slices of the meat, and garnish with cress.

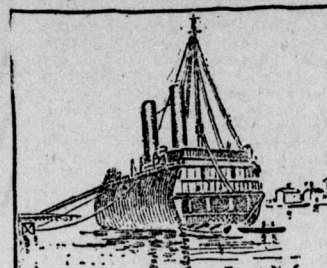
Brown Bread—Scald one quart of milk and pour it over a mixture of one and one-half pints corn meal and one pint of rye meal (not flour); add one cupful molasses, one tablespoonful melted butter, one teaspoonful salt and the same of soda, with one egg; turn into a buttered tin and steam four hours. A person once eating this brown bread will never wish for any other kind.

Dutch Peach Cake—Sift together two cups flour, half a teaspoonful of salt and two teaspoonfuls of baking powder. Work in lightly one-fourth cup of butter; stir in one cup milk which has had one beaten egg added to it; turn into a buttered pie tin and press into the top of the dough four pecked, stoned and quartered peaches. Sift three tablespoonfuls of sugar, one of cinnamon, mixed, over the top. Bake and serve with butter.

Peach Pie—Line a plate with plain paste with a pastry jagger cut several half-inch-wide strips of puff paste; put three of them across the pie and then three more at right angles with these and a strip around the edge. Put half a peach in each of these squares, hollow side up. Mix one teaspoonful of cornstarch with half a cup of sugar and one cup of cream. Pour this carefully into the spaces between the fruit. Bake until the paste is a delicate brown.

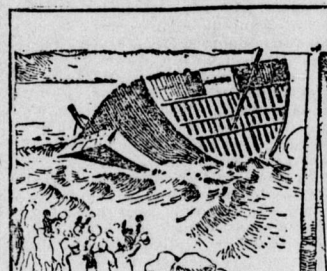
A POWERFUL ICE BREAKER.

A New Nose Has Been Put on the Unlucky Russian Craft.
The ice-breaker Ermack, which was built last year by Messrs. Armstrong, Whitworth & Co., from the designs of Admiral Makaroff, for the Russian navy, was recently returned to Newcastle, in order that the hull might be lengthened, and the form of her



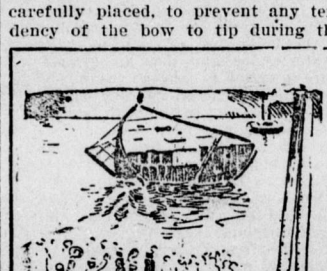
THE BOWLESS ICE BREAKER.

bow altered. The vessel has, therefore, been cut in two, as much of the bow being removed as possible without placing the boat in dry dock. The second stage in the operations has just been reached, and the launching of the new bow successfully carried out. The new bow is of such a shape that, un-



LAUNCHING THE NEW BOW FOR THE ERMAK.

aided, the structure would have been unable to maintain an upright position, and therefore a large steel pontoon was built, and securely riveted to the sides of the bow. Ballast was carefully placed, to prevent any tendency of the bow to tip during the



THE NEW BOW OF THE ERMAK IN THE WATER.

launching, and special precautions in the way of shoring and timbering were carried out. The curious-looking structure went into the water without the slightest difficulty, and floated within an inch of the calculated draught. The length of the new bow is seventy-five feet, and the launching weight was nearly 500 tons.

AN HONORED SCOTSMAN.

Donald Gordon, the Queen's New High Land Attaché.
The London Graphic says: Constable Donald Gordon, of Motherwell, has just been appointed to the post of Highland Attaché to the Queen. Gordon was summoned before Her Majesty, at Balmoral, on Thursday last, and receiving the appointment left Motherwell to take up his duties. He is twenty-eight years of age, and has been connected with the Lanarkshire Constabulary in Motherwell for the past four years. It may be mentioned that



DONALD GORDON.

Gordon has previously been in the service of the Queen, having been for a considerable time mounted messenger to Her Majesty. His father has also been for a long period in the Queen's private service. Gordon's fellow constables presented him with a leaving with a dressing case and other articles as a token of their esteem.

New Implement for Soldiers.
An implement to be added to the soldier's kit, which can be used as a spade, pick-axe or saw and also as a shield for protection from bullets, has been invented by the Earl of Wemyss. It is said that the contrivance is to be adopted by the British army.

THE GREAT DESTROYER

OME STARTLING FACTS ABOUT THE VICE OF INTEMPERANCE.

Our Temperance Army—Many Vessels Are Lost at Sea Through Carelessness Due to Intoxication— wreck of a United States Corvette Due to Drink
We're soldiers of an army.
A noble temperance band;
And in its cause united
We labor heart and hand.

Though young, we know the Saviour
Is ever near at hand.
To cheer us in our labor
And bless our growing band.

We're soldiers of an army;
For volunteers we call,
To fight as valiant heroes
Against King Alcohol.

And still there's room for others;
We gladly welcome all
Who come to join the battle
Against King Alcohol.

And if we ask, believing,
He'll give us each and all
The strength we need for battle
Against King Alcohol.

Ships Lost by Drink.
One of the best marine underwriters of this country, in discussing the question of how many vessels are lost annually through carelessness that is due to intoxication, said to a Mail and Express reporter recently:

"It is impossible to say how many ships are lost because of drunken officers. If we could but know it would be to learn that hundreds of the fine vessels that have been posted as missing in the last ten years turned into Davy Jones's harbor as a result of drink. In commercial life there has been for years a tendency to encourage temperance by doing away with employees who are given to splicing the main brace. But there has been no such disposition among those controlling vessel property. Looking through a glass other than a telescope is now more common on foreign ships than a half century ago. I do not think that a sea song has been written within the last decade without the word 'grog' in it. Within my recollection as an underwriter and during the time I spent at sea as master mariner and mate, I saw many instances of befuddled brains being responsible for the loss of well found craft. It's all right enough to deal with a certificate when carelessness in stranding or some other marine disaster is shown, but it seems to me that greater attention should be paid to the drinking capacity of the applicant for a license.

"One of the greatest wrecks in the history of the English Navy was indirectly due to drink. The crew of the vessel was the capsizing of the 'Royal George,' but his account of the sad affair is not exactly accurate. In all about 1000 persons, women, as well as officers and sailors, went down with the craft. She was a battleship, of 100 guns, and during the summer of 1752 had just returned from a cruise and was leaking. The majority of her crew were impressed men, and fearing that they might run away if the vessel was docked at Portsmouth, it was decided to careen her in the roadstead. The crew was the tallest in the service and, in addition, she had the square yards of anything then afloat.

"At best, the task of heeling a boat to get at a leak is a most difficult one. It has been shown that the officers and men had been on a great spree the night before the craft toppled over. Many of them were still under the influence of spirits when the disaster took place. This may explain in a way the awful mistake of leaving the lowered deck ports open, and when the boat was heeled a sudden squall coming up threw her wholly on her side, the cannon rolling over to the depressed side. The sea water rushed into the open ports, and that ended the 'Royal George.' The guard and about seventy others were saved.

"The loss of the United States corvette Kearsage, on Roncoador reef, always has been attributed to drink, not on the part of her commander, Oscar F. Heyerman, but on the part of one of his line officers whom he trusted too well. A great many of the particulars that preceded the stranding of this historic ship were not brought out during the court of inquiry or even the court-martial that followed. It is known in the navy, however, that a certain officer, on whom devolved a portion of the navigation, bent his elbow quite a little for some days before the stranding, but I do not think that the matter was brought to the attention of Commander Heyerman until it was too late.

"The loss of the Atlantic was another instance where it has been charged that liquor played a part. She struck near Meagher Island, Nova Scotia, April 1, 1870, and of the 957 persons on board a total of 535 were drowned. Not a woman was saved, and all but one of the children were included in the loss. Capt. James A. Williams, who commanded the ship, had his certificate as extra master and master taken away for two years, and the certificate of the fourth officer was suspended for four months.

"There are many more as well as abroad who believe, as a result of private information, that the loss of the battleship 'Victoria,' in the Mediterranean, was due to 'grog.' It has been shown that there was something mentally wrong with Admiral Tycroft the day of the disaster, and it was reported at the time that he had suffered from an attack of sunstroke while on shore at Beyrout two days before the disaster.

Alcohol and Insanity.
The Governor of Lower Austria, Count Khevenhuller, has instructed the police authorities to assist the Working Men's Society in the distribution of a million pamphlets entitled "Away with Alcohol." Every policeman will personally supervise the distribution of the booklet on his beat. It tries to prove that every sixteenth man that dies in Austria dies from what is popularly known in the hospitals as "beer heart"—viz., fatty degeneration of the heart, and points out that, according to official statistics, ninety-two per cent. of the inhabitants of the Austrian insane asylums recruit themselves from drinking people.

We commend this action of an Austrian Governor to our American President.

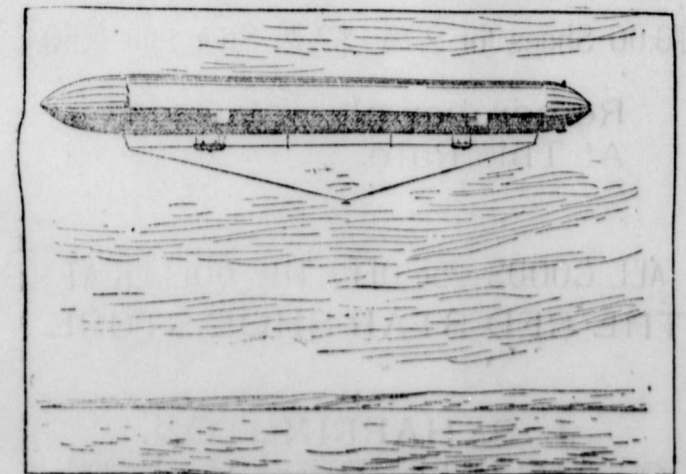
Dullahan Trimmings.

Learning that liquor was being supplied to ladies by a firm of dressmakers in Dublin and charged in the bill as "trimmings," the Dean of the Chapel Royal paid a visit of inspection and remonstrated with the offenders. If they must call the drink trimmings, he added, let them be honest about it and call it "delirium trimmings."

The Crusade in Brief.

The Finnish Turva Temperance Society at Ashabula, Ohio, is about to erect a \$10,000 temple in which to hold its meetings and entertainments.

The friends in Mississippi satisfied with the blessed results that come to every community where the saloon is prohibited, are now assiduously seeking to banish the saloon from the entire State. It is a symptom of good moral health that the directors of the Shenandoah (Iowa) Fair Association felt called upon to discontinue the responsibility for liquor advertisements appearing in the premium lists.



THE AIRSHIP AT FULL SPEED.

taken place in October, 1899, but the balloons supplied did not fill the requirements, and the first ascent did not take place until July 2, 1900, when

sent happened earlier than he intended. "My aim," he said, "was to return to the floating pontoon whence we

The young woman who proposes marriage is only trying to make a name for herself.