

Sea, Land & Air

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OF GENERAL INTEREST

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Science and Humanity.

An aeroplane carrying several people has successfully voyaged from London to Constantinople and back, a journey of 4000 miles through the clouds. An airship has cruised from one end of the Mediterranean to the other.

From France, where our soldiers are facing the most terrible and scientific foe ever known, the whisper of wireless signals has been heard in Australia and New Zealand. Those signals from the famous Eiffel Tower have crossed twelve thousand miles of sea and land in the incredible time of one-fifteenth of a second.

Although nature has decreed that man shall not breathe and live under water, human knowledge and skill have perfected the fish-like submarine boat. In this contrivance men creep along the depths of the ocean while breathing artificially produced air, and, though hidden from the view of those above water, can scan the surface in all directions, unseen yet seeing.

The greatest industrial nations of the world have sent their men in millions to the battlefield while their women, in the space of a few months, have learned the numerous and intricate arts of manufacture and engineering and applied themselves with such marvellous intelligence and energy that every one of those nations is able to manufacture in far greater volume than ever.

Financial conditions have assumed unparalleled shape. The established ideas and supposedly proved theories have been completely overthrown in less than four years. Nations accustomed to speak in millions now deal with the greatest facility in billions. Small communities like those of Australia and New Zealand have provided enormous loans without outside assistance.

On the soil of Flanders and Northern France, the cockpit of Europe for centuries past, the greatest nations of the earth are

locked in a mighty struggle, employing all the accumulated and continually advancing knowledge of the scientist and skill of the engineer.

Men born among the securities and comforts of modern society unflinchingly face hardships and terrors which dismay the men of less advanced races. They march consciously forward through the withering hail of bullets, shrapnel and high explosive shells hurled from above and all around, through liquid-fire and poison-gas, to meet their opponents in the final clash of steel and primitive hand-to-hand encounter.

Two of the greatest cities of the earth are subjected to almost daily visitations of enemies who rain death from the clouds, while from these cities a stream of missiles is hurled thousands of feet upwards towards the raiders.

Men in millions and materials in vast quantities are carried across the seas of the world, in spite of the enemy lurking beneath the surface.

The greatest Navy the world has yet seen lies hidden in the mists of the North Sea, yet it guards the oceans of the world so effectually that no German merchant vessel has dared to venture from the remotest port of refuge since August, 1914.

This is truly an age of science and skill, such an age as even Jules Verne could not imagine. Yet, in the height of these wonderful triumphs of human skill and intelligence, the most advanced peoples of the earth are engaged in bloody strife. All the skill, and all the achievement are strained to their uttermost in the race of destruction.

Viewing the awful chaos from one standpoint, it appears that man has progressed too far, or too rapidly, and that human advancement has turned to mock those who have achieved most. We might even be tempted to doubt our religious teachings, and say there is no God.

But looking deeper and further, we find

that the source of it all is too little knowledge instead of too much. This catastrophe was brought upon the world by a nation which had advanced brilliantly in some directions while remaining incredibly primitive in other things.

The German people started late in the field of practical achievement but, realising their handicap, they applied themselves to science and industry with such vigor that they overtook the older nations. Such a rapid rise, however, robbed them of that honesty and humanity without which no nation can progress beyond a certain stage. They were so overwhelmed by their success that they readily absorbed the materialistic teachings of the Prussian section, and the belief that they were supermen. In fact, they acquired that frequent disease of those who achieve sudden success and are not tempered by experience—swelled head—which is as possible in a nation as in an individual.

When the climax arrived, that nation fell with terrible suddenness. The veneer of civilisation melted, and it became a nation of barbarians, using the terrible weapons of science accompanied by the methods of savages, lying, murdering and ravaging, slaughtering women and children, devastating fair lands and peaceful cities. This nation, which was winning the admiration of the world by its science and organisation, became the destroyer of peace and liberty, the bully of Europe and the hated foe of civilisation.

No matter what temporary advantages such forces and methods might achieve, their ultimate success is impossible. No matter how dark the outlook might appear for the defenders of Christianity and liberty, the German nation will fail and be defeated. Looking back over the long history of two thousand years we mark the slow but certain progress of humanity. Though it might be delayed, that progress cannot be arrested.

Our science and our skill must go forward, but our study and labours must be applied not only to physics, mechanics, chemistry and mathematics. We must study the problems of human nature with equal devotion. That is the direction in which the advance has been incomplete, and it is one of the great lessons which will be learned from this war.

The study of human nature must be on a broad scale and a subject for all, but it must be accompanied by an understanding of all the wonders of human endeavor

achievement in the fields of science, art and engineering, and in the realms of the sea, the land, and the air.—By Lucania.

Sea, Land and Air

The reception accorded to the first number of "Sea, Land, and Air" has surpassed all our expectations. We have received congratulations and expressions of appreciation from all directions, and have been assured that this new and unique magazine has filled a long-felt need.

The demand for authoritative and clearly expressed descriptions of and information about the modern wonders of the sea, the land, and the air, is even greater than we anticipated.

Our first number has been read and appreciated by men, women and children of all grades and occupations. We feel certain that the wonderful work and achievement of the scientist, engineer, navigator, aviator, soldier and telegraphist is watched with keen interest by millions of people in Australia.

Every issue of "Sea, Land, and Air" will contain articles, photographs, and stories upon the subjects within our sphere which will entertain the old, and educate the young of both sexes.

SO LONG AGO.

By Twyford, Special to "Sea, Land & Air."

Adieu to old London, to Norwood

To Winchester, Salisbury Plain,

I hear the brass bell now a-ringing

And snorting the R.A.D. train,

Adieu to the land of fair roses

Of shady lanes, flower deck'd groves

Of oak elms, bushes and chestnut

Limes, sycamores, ash that one loves,

And larches, laburnum and lilac

The hawthorn so fragrant in spring

Adieu to the thrush and the linnet

The glades where the nightingales sing.

Adieu to the meadows and poppies so red,

Tall daisies that skirt the ripe corn,

Dog roses that blush in the morning

And fox gloves that bloom near the thorn

Anemones, blue bells in April,

Those pink and white chestnuts in May,

See Twyford and Ifley in Springtime

South Devon when gathering hay,

Fair Teignmouth, the dart in the Autumn

Clovelly—the Hobby—*red—gold—

And Bideford Heath with a sunset,

Oh beauties and charms manifold

Adieu quiet dells, breezy uplands,

I see, heather, gorse once again—

Bright blue myosotis palustris by old Twyford
brooks,

All blue from the sunshine and rain.

*The Hobby Drive, and the road to gallantry
Bower, Clovelly, are much admired by Devonians.

The German Mystery Gun

By H. MARCEL
Specially Written for
Sea, Land and Air.

It is safe to say that the announcement of a German gun dropping shells into Paris from a distance of 75 miles has not only astonished the general public, but it has surprised the gunnery experts.

Naturally every expert has been busily occupied examining the problem since the first news arrived. At first many of them were inclined to doubt the truth of the reports, or they said, if true, such a gun would be impracticable and valueless because of the short life and inaccuracy from which such a gun would suffer.

Most people will remember, however, that the easy demolition of the forts at Liege and Namur by German guns caused some surprise to the Allies.

In the light of later reports the fact that Paris is subject to continual bombardment from a distance of 75 miles is proved. After examining the question closely, we are able to give our readers a very clear idea of the possible details of this gun, and we feel certain these facts, which are based upon an expert knowledge of modern artillery, will prove both interesting and informative.

The range of British guns is always stated in yards, and hitherto the greatest range considered practicable for big guns was 44,000 yards, or 25 miles.

The new German gun is firing over a range of 132,000 yards, that is, three times the accepted practical range.

Anyone who has fired a rifle knows that to hit a target at anything beyond point blank range, the rifle must have elevation; it must be pointed upward to a greater or lesser extent according to the distance of the target. The same thing applies to all guns, large or small.

The reason for "elevation" is understood by most people, and it can be explained quite simply. Immediately a bullet or shell leaves the muzzle of a gun it is acted upon by the force of gravity, which tends to make the shell fall to earth. From any given height all bodies, except such things as pieces of paper or straw, fall to earth in the

same length of time. In consequence of this, the shell must travel fast enough to reach the target before falling to earth, but it is not possible to produce sufficient velocity to carry the shell direct to a distant target.

If the muzzle of the gun is elevated the shell starts with an upward as well as a forward direction. The force of gravity acts continually against the rising shell until a point is reached where gravity gains control. By this time, however, the shell has reached a considerable height, several miles in the case of the largest guns, and an appreciable time is occupied in falling.

While travelling upward the shell has also travelled forward, and if correctly aimed and elevated, it has sufficient forward velocity, when it starts falling, to carry it to the target just before or at the same moment as it touches the ground.

From the foregoing it will be clear that a shell must have sufficient velocity when leaving the gun to carry it sufficiently upward and forward. It is also essential, of course, for the elevation to be correct. If the gun is not sufficiently elevated, the shell will fall short because it falls from too little height and touches the ground before it has time to reach the target. If the elevation is too great for the distance the shell will fall beyond the target.

Now, to throw a shell of a certain weight upward and forward with a given velocity, a definite amount of energy must be imparted to it before leaving the gun. This energy, as we all know, is supplied by the explosive, or as it is properly termed, the propellant.

The full energy of this propellant must be developed before the shell leaves the gun, but it must not be developed too quickly, or it becomes disruptive, and bursts the gun. Consequently the gun must have a certain length so that the shell is travelling inside as long as the propellant burns.

If a propellant burns quickly, the gun must be sufficiently massive to withstand the bursting force, and there is a limit be-



BIG GUNS FOR THE USE OF THE ALLIES.



HIS MAJESTY KING GEORGE INSPECTING SHELLS FOR THE BIG GUNS THAT ARE NOW KEEPING THE GERMANS IN CHECK.

yond which the gun would be so massive as to be unusable. There is also a practical limit to the length of a gun; if it were made too long the muzzle would tend to droop, and it would also be unsteady when firing, with the result that correct aiming would be impossible.

Before the war the largest guns known to be in use were 14 inch calibre, and their length was $52\frac{1}{2}$ feet, or 45 times their calibre. The greatest length considered practicable for any gun is 50 times calibre, therefore, a 15 inches gun might have a length of 62 feet.

It is assumed, from the published reports and from general knowledge of modern artillery, that the German gun is firing a 15 inch shell, and its calibre is therefore 15 inches.

A 15 inch shell would weigh approximately 1500lbs., and to throw such a shell a distance of 75 miles, if the gun is elevated to 45 degrees, which is the greatest elevation practicable, the shell would have to leave the gun with a velocity of 3000 feet per second, which is over 2000 miles per hour.

The force required to produce such a velocity would be 190,000 foot tons. Putting it in plain language, it is a force equal to that which would be required to raise a weight of 1000 tons 190 feet in the air. We can easily imagine what would happen to the gun and everything within a mile of it if that enormous force were released suddenly in the form of an explosion.

This brings us to the length of the gun, because this great energy must be released comparatively slowly, but the gun must be long or the shell will have left before the full force is applied.

We know that a charge of 500 or 600 pounds of slow burning cordite is necessary and this would require a gun 100 feet in length.

If the greatest practicable elevation, viz., 45 degrees, is given to the gun, the highest point reached by a shell under the above conditions would be 40 miles above the earth.

Travelling at the rate of 2000 miles per hour; a shell would cover 75 miles in a little more than two minutes, but allowing for the extra distance caused by elevation, and for the loss of velocity, it may be said that the shells drop in Paris about four minutes after leaving the gun.

We are now at the stage to make some assumptions about the mystery gun.

If the gun is of a practicable length, a quick burning propellant must be used, but

the gun would have to be exceedingly massive to prevent bursting.

If a steadily burning propellant is used, the gun must be fully 100 feet long, but such a gun could only be aimed accurately by being braced with massive supports along the barrel, and those supports would have to be shifted whenever the target is changed or the distance altered.

In either of the two cases stated above, the weight of the gun would make it unwieldy. The weight of an ordinary 15 inch gun, 62 feet in length, complete with carriage and mountings, is 700 tons.

That the shell is thrown to a height of 40 miles seems impossible.

In the light of our knowledge, only one solution remains. A large portion of the initial energy imparted to the shell is lost by the resistance of the air through which the shell rushes. If any appreciable percentage of that loss can be saved, the shell will travel at a greater speed and consequently both the elevation and initial energy can be reduced.

Experience with aircraft has emphasised the great importance of reducing loss of energy through air resistance. As far as possible, all exposed parts of aircraft are tapered or "streamlined" after the fashion of an ordinary shell.

We believe the most feasible explanation of the mystery gun is probably to be found in the improved shape of the shell, possibly combined with some of the other factors mentioned above in a modified form. In addition to this, there is also the fact that at very high altitudes the air is greatly rarified, and air resistance reduced proportionately.

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GENERAL FOCH, THE BRILLIANT FRENCH LEADER.

Addressing British, French and American war correspondents on the 4th inst., he said:—"The German advance has made practically no progress since March 29. The wave dies on the beach because it finds a sufficient obstacle. The Boche is completely arrested. We shall try to do better. The future is ours, and will show the measure of our success."

PILOTS OF DESTINY

By C. A. Jeffries

Specially Written for
Sea, Land and Air

One of the most fascinating and terrible features of the aeroplane is the boundless power it places in the hands of single individuals to change the whole course of history. When this war is over, and the historian begins to analyse the reasons why various enterprises failed and others succeeded, it will, after some experience, be a case of trying to find, not the woman, but the aeroplane in the case.

The first Briton to die fighting in the world struggle was an aviator attached to General Haigh's First Army Corps at Mons. He went out on that August evening the British arrived there to see what the Germans were doing on the North-West. He never returned, and months afterwards it was learned through Irvine Cobb, the American writer, that he had been shot down.

Next day another aviator went out and found 10,000 Germans calmly walking round the flank of the British position. Before Joffre's wire had been received, Sir John French had been advised by his aerial scout that the French Territorials on his right had given way before Bulow's smashing massed attacks, supported by the concentrated fire of 1000 guns. It is not exaggeration to say that two airmen, whose names are at present unknown to the public, saved the British armies in Belgium from annihilation. No one cares to think of what might have happened had French's "Contemptibles" been wiped out.

For twelve dreadful days and nights the world gazed dazedly and uncertainly at a vast military operation by which the Franco-British front was swung back from the Verdun-Mons-Bray line to the Verdun-Paris line. The British armies were on the extreme end of that vast line that, pivoted on Verdun, swung in a gigantic semi-circle till eleven of the richest departments of France were in the hands of the Huns. For those two British armies it was a veritable race between them and Von Kluck's and Von Bulow's overwhelming hordes, with the Eiffel Tower as a winning post.

In all history there is nothing to compare

with the wonder of that race. The retreat of the Ten Thousand was an afternoon stroll compared to it. Against the splendor of it the glory of Sir John Moore's retreat from the heart of Spain fades dim. For these two British armies fought all day and ran all night, and slew, and slew, and slew as they ran, on a scale unknown before.

As one German officer put it: "We call it a pursuit, but it's a butchery. If we chase them long enough we'll have no army left."

When that swift campaign of a score of conflicts that we call "The Battle of the Marne" was over, and the Germans had been driven back 70 miles in three days, and Paris was saved, journalists wrote and people talked of "The Mystery of Paris." The rout of the Huns was inexplicable, so seemingly impossible, so utterly at variance with all the rules of the game that it seemed uncanny. The maddest conclusions were jumped at, the wildest speculations of the miraculous let loose: HOW DID 750,000 French and British exhausted, fleeing troops, almost devoid of artillery, utterly smash 1,250,000 victorious Germans with overwhelming artillery?

Well, if you dive right into the basic reasons, after tracing the tremendous conflict through all its phases right down to the root cause, you arrive at a single aviator—a French boy of about 19 years, whom a German gunner mortally wounded with a chance shot. If the Germans could locate that gunner to-day they would probably hang him for the mess he made of things. But probably the unfortunate wretch died in the rout he helped to bring about.

When von Kluck and Bulow arrived as close to Paris as Parramatta is to Sydney, Kluck's extreme right was faced on the Oureq by Maunoury's Sixth French Army. Next to Kluck Bulow faced the British. Bulow was on Kluck's left, and on Bulow's left was Von Haussen's Saxon Army, and on his left again the army of the Prince of Wurtemberg. On the French side the armies lay, reading from South-West to North-East, Maunoury's Sixth, on his right the British, on the British right d'Eperey's

army, the Fifth, and on his right Foch's Seventh.

Kluck attacked Maunoury with terrible ferocity after a bombardment that was most murderous. When the first assault came Maunoury held his own, but Kluck brought up 80,000 men and drove Maunoury back by sheer weight of numbers. In response to Maunoury's call Joffre sent 20,000 mixed troops from Paris in a five miles' line of taxis and motor cars and lorries. In the meantime Maunoury sent out an aeroplane to try to ascertain how many more Germans were likely to be flung against him. A random shot by some German gunner mortally wounded that aviator and badly damaged his machine. The nearest French force was that of Foch, and the dying boy made for it. As he flew he saw a gap of seven miles or so between Bulow's horde and the Saxon army. Then he saw something else: 400 huge lorries and trailers loaded with ammunition and guarded only by a couple of thousand cavalry.

The wounded aeroplane and the dying boy staggered over the German lines and landed behind those of Foch. The boy gasped out his information, pointed to where he had marked the position on the map, and died.

Ten minutes later a swarm of French cavalry swept through that gap and fell on the ammunition train, slaughtered the guards, and set fire to the petrol tanks of the lorries. It was a tremendous display of pyrotechnics.

They heard the thunderous roar of it away in Paris. Vons Kluck and Bulow heard it, too, and shivered; it was the death-knell of their careers. Next morning their troops howled for ammunition, and got packets where they wanted cases. Divisional officers cursed and raved, begged and prayed: "Give us ammunition or we die!" None came. The position grew desperate. Maunoury and the English dragged their guns closer and began to blast the armies of Kluck and Bulow at point blank range. Kluck's right gave way. Then all Kluck's army gave way, and trampling over Bulow's decimated legions, streamed away for the hills beyond the Aisne.

The rout of the Marne had begun. The Huns were smashed. The rout became general. And all its pyramid of dead was the hecatomb of the conquering aviator.

It was on the Somme. The bellowing drum fire of the British had smashed the trenches, cracked the concrete dug-outs, through which poured poison gas and liquid fire; and pulverised the communication

trenches. Unless that drum fire could be broken up the position was lost. The line might break. Behind Hindenburg's sappers and engineers toiled night and day, preparing another line, driving great gangs of civilians to work at the point of the bayonet.

Von Arnheim was brief and to the point. He must have a thousand guns to reply to that awful drum fire that was rocking the very earth. They sent him guns in myriads and they began to pour in their fire. But with the morning came a cloud of battle-planes, rushing down at 120 miles an hour, sweeping, ranging, shooting down any Germans who offered resistance, seeking, seeking, seeking. They found those guns, they flung the signals and the drum fire lifted and came down with a bellowing thunder on those guns that had come to save the position. It fell like a veritable blizzard, and when it paused the cloud of aeroplanes swept down, marked the damage, and then up into the clouds again, flinging their signals; and another awful blizzard of high explosive, gas, and liquid-fire shells drenched all that great artillery park along a five mile front. That first storm had destroyed no less than 72 of the biggest guns the Germans had. Liquid fire had destroyed the ammunition of whole batteries; and along others every man in the gun crews lay dead, gassed, burned to a cinder, or dismembered by the explosive shells.

By night over 60 batteries had been destroyed or put out of action, and the drum fire once more fell on the place where hordes of Germans waited in hiding till the earth closed in on them like the leaves of a closing book, and hid them till the Day of Judgment.

That is what aerial supremacy means. The God of Modern War is the boy in the aeroplane.

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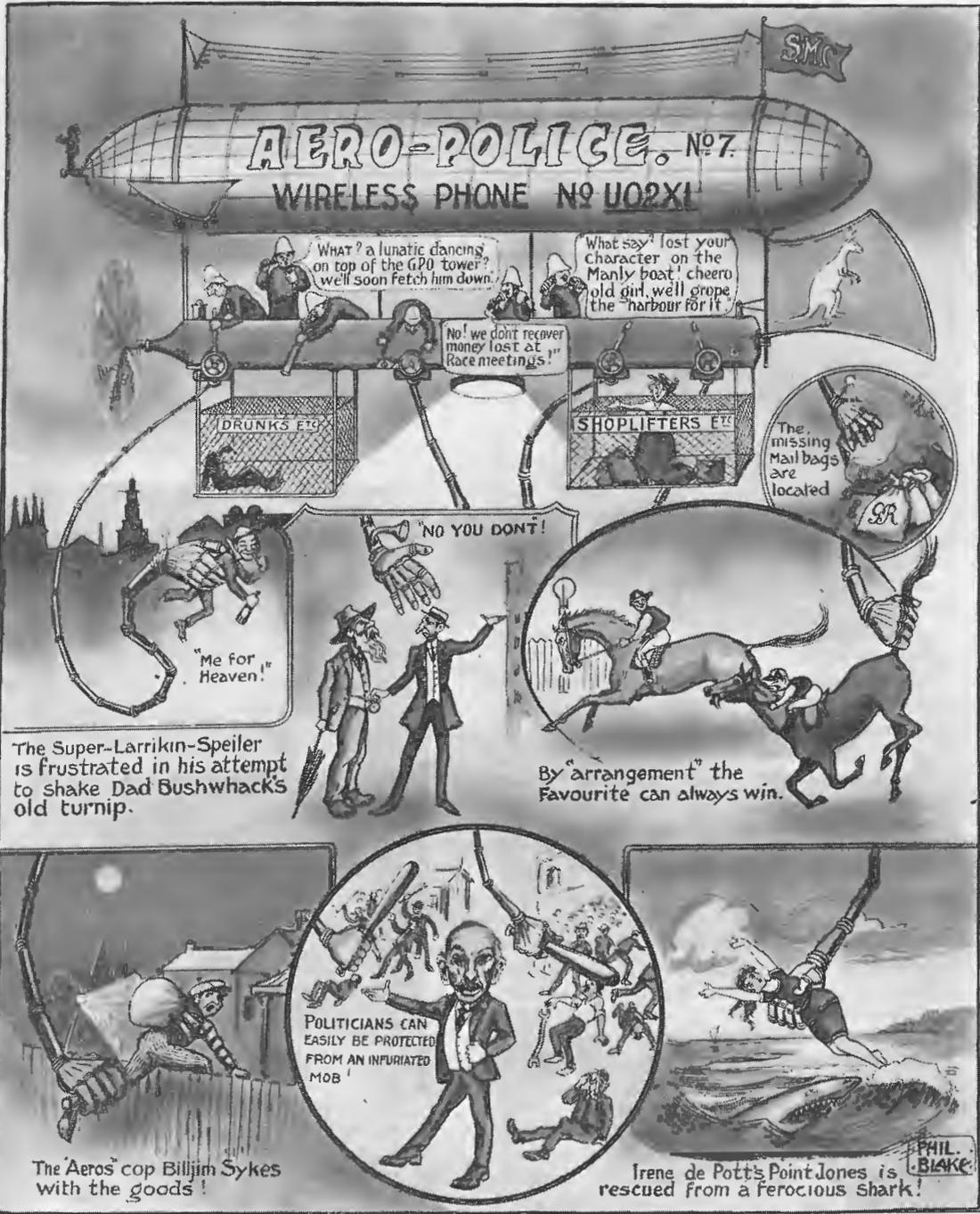
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Irene de Pott's Point Jones is rescued from a ferocious shark!

PHIL. BLAKE

Our Maritime Peril

(By O. M. Bagot)

Those who know anything of the great German ambition in regard to the mercantile marine are aware that the desire to usurp Great Britain's place was general. Those who know little of German methods where the interest of the Fatherland was concerned are able to gather some idea from the following sentiments, apropos the intention to accomplish the desire, expressed at the laying of the foundation stone of the huge offices erected at Bremen by the Norddeutscher Lloyd, a few years before the outbreak of war.

Burgomaster Dr. Marcus: "Thy field of action be the wide globe, thy firm anchorage the Fatherland."

Burgomaster Dr. Barkhausen: "As thy ships defy the storm on every ocean, so this house may stand firm in storm and stress."

President Geo. Plate: "There thou standest, O stone, to our joy and to the honor of this good city; thou shalt be corner-stone of the past and our future, and if one day thou seest once more the light of day, people shall say, 'How beautiful did our forefathers build—but yet how small.'"

To adequately disclose how the German shipping peril menaced us, it is essential to revert to the early days, when the octopus-like growth began to develop. As with all things, the Germans laid their schemes well, Britain held the proudest position in the shipping world, and any scheme to oust British supremacy must not have a single flaw. Far better to wait five years, ten years, or even a longer period perfecting the plans than allow precipitation to bring about any dislocation of the great scheme to make Germany the greatest mercantile nation.

It must not be assumed from the above that once the idea in mind was considered perfect any delay in setting the plan to work was permitted. The early history of the Norddeutscher-Lloyd very clearly discloses that, and as it is that company to which reference will be frequently made in order to show how, step by step, the Germans operated in the order to accomplish the world-wide development, it will be of interest to learn of the inception of that company.

Crusemann is a name famous in German shipping annals. It also exacts some reverence in commercial life, consequently it is not at all surprising to learn that the ten German business commandments were closely followed by any scion of the house of Crusemann. The commandments referred to played a big part in Germany's development, and if only for that reason, are worth devoting some space to.

Vice-President Achelis: "God helps him who has courage."

Director-General Dr. Wiegand: "Thy ground—firm and sound, thy field—the wide world."

Director Bremermann: "Onward, onward, never backwards."

Director Leist: "Fifty years of earnest endeavour and proud signs of success, point out to thee the future path."

Architect Schelb: "To the clever merchant; to the bold skipper; to the beloved Fatherland."

1. In all your expenditure, however small, never lose sight of the interest of your fellow-Germans and your Fatherland.



G. E. CRUSEMANN,
The first Manager of the Norddeutscher-Lloyd.

2. Never forget that when you purchase a foreign-made article, even though it only costs a pfennig, you diminish the fortune of your country by your act.

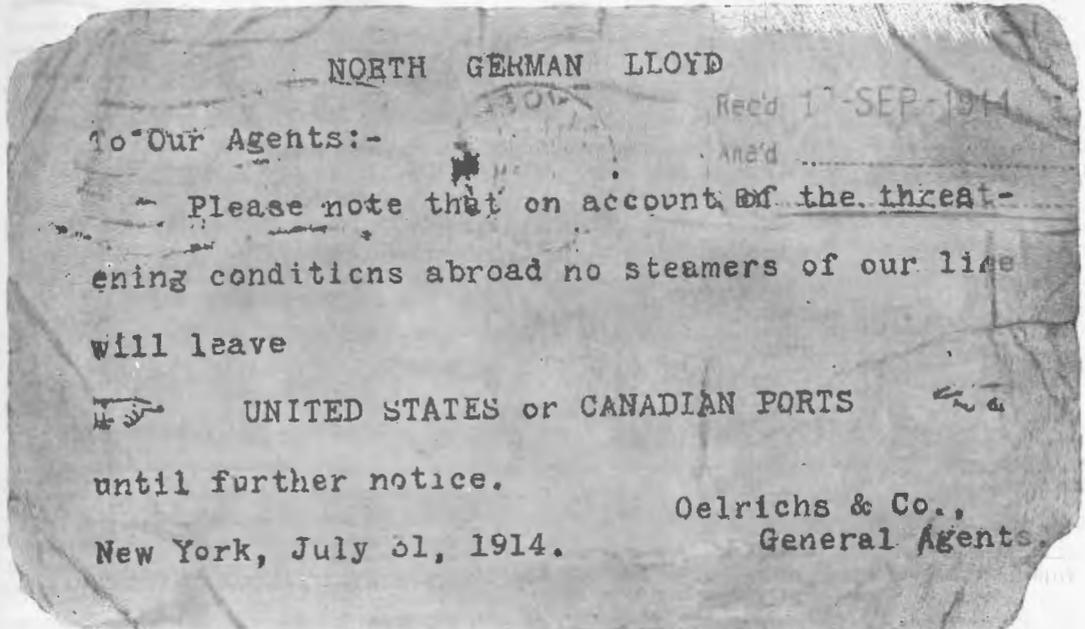
3. Your money should only profit German merchants and German workmen.

4. Never profane German land, German houses, German workshops, by the presence and use of utensils or machinery made by foreigners.

5. Do not eat imported foodstuffs, which do a wrong to German agriculture, as well as injure your health, and are, besides, free from the sanitary inspection of German officers.

6. Write on German paper with a German pen, and dry your German ink with German blotting paper.

organisations in the world. He was in America at the time the idea occurred to him that besides achieving something for the beloved Fatherland he could enrich himself and he at once laid his plans in accordance with those ideas. The elder Crusemann moved in the best business circles in Germany, and it was to him the son turned to obtain aid in carrying out his ambitions. It is rather remarkable that the father, who was usually keen in such matters, did not see as far ahead as the son, for the first



THIS POSTCARD, DATED "JULY 31st, 1914," CLEARLY SHOWS THAT THE GERMAN PLANS WERE WELL PREPARED BEFORE AUGUST 4th.

7. A German jacket gives distinction to a German back, and a German-made hat is the only covering for a German's head.

8. German flour and German beer can alone produce the German's power.

9. Whether you drink coffee or chocolate, always see that it is the product of Germany or her colonies.

10. When you are beset with foreign imitations, be convinced that the only products worthy to be consumed by Germany's sons are the results of Germany's trade and Germany's commerce.

As has already been stated the younger Crusemann revered those commandments and having business ability combined with the German love of the Fatherland, he, when 29 years of age, took what proved to be the first step towards the formation of what became one of the greatest shipping

letter giving details of the son's ideas elicited very little sympathy. Undaunted, the son put his second appeal forward, at the same time pointing out that such a movement was in the interest of Germany and should be supported. Whether the appeal to his patriotic principles touched the father, or whether time to deliberate had brought a change of mind, will never transpire, but it is known that the son's second letter induced action, and C. E. Crusemann at once began to interest bankers, the heads of business concerns; in fact, all and sundry he deemed would be interested.

It must be stated here that H. H. Meier, a German Consul, acted in conjunction with the younger Crusemann, and though in America—New York—his influence was so great that his association with the move-

ment induced members of the Bremen Senate and Chamber of Commerce to interest themselves at the very outset. Bremen was elated when the news of the formation of the N.D.L. was made public, and soon the enthusiasm had spread all over Germany. To the Germans it indicated that what was to develop into a serious thrust into Great Britain's maritime

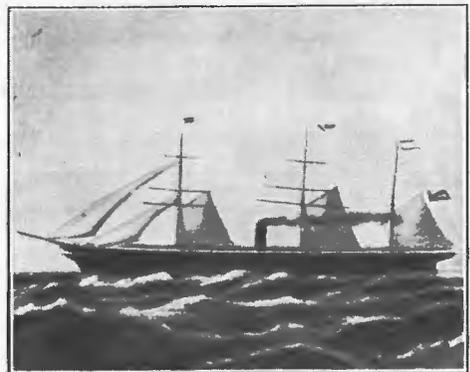
those days, 1856, the steamers Adler, Moltke and Falke, were regarded by the Germans as ideal craft. They were owned by Germans, they were manned by Germans, they were controlled by Germans, and above all, they were assisting to develop the affairs of the Fatherland. They might be small, and they might be slow and an abhorrence to the traveller, but all those defects could



THIS ILLUSTRATION SHOWS THE FRONT OF THE POSTCARD BEARING THE DATE, AS STAMPED BY THE U.S.A. POSTAL DEPARTMENT.

connections had been launched, and that besides shippers, importers, bankers and others who play an important part in national affairs the Senate was in sympathy. The extent that the "sympathy" extended to was not disclosed, but the impression is general among those who are qualified to express an opinion that the moral support faded into insignificance when the financial support was considered, for within nine months of the proposal being mooted, three vessels owned by the company were running, and three months later plans were in hand for the construction of four large vessels which were to open up the service between Bremen and New York.

In view of events of recent date, in fact, the whole trend affairs have taken since Germany decided to oust Great Britain from her position of importance in regard to the mercantile marine, it is interesting to note that the first service inaugurated by the Lloyd was to England. Though small even in



THE STEAMER BREMEN, THE PIONEER OF THE N.D.L. FLEET IN THE AMERICAN TRADE.

be tolerated in the interests of Germany, and those defects were tolerated in a most patient spirit, so when the first of the four vessels owned from British builders was

(Continued on page 135)

A VISIT TO THE BRITISH FLEET

(By LEWIS R. FREEMAN)

All information pertaining to the British Navy is of interest to Australasians, and none more so than that concerning the manner in which our brave sailors enjoy a leisure hour while watching and waiting for the Germans to emerge from their haven of shelter and put to the test their belief in the superiority of the High Seas Fleet. The following article graphically describes some of the pleasures and pastimes officers and men enjoy, and together with the illustrations appearing elsewhere in this issue will enlighten as well as entertain readers.

While lunching with Admiral Sir Doveton Sturdee in the course of a recent visit to the Grand Fleet, which must always remain one of the most memorable experiences of my life, I ventured the opinion that the work of the British Navy in sweeping every enemy vessel—warship and merchant steamer—from the surface of the Seven Seas, was the one most outstanding achievement of the war.

“Perhaps you are right,” said the victor of the Battle of the Falklands thoughtfully, “but you must not lose sight of the fact that to win this victory over the German, the British sailor has had to win an even more remarkable victory over himself. At the outbreak of the war I had every confidence that, in one way or another, we would be able to establish a control of the sea quite as complete as that which we actually have established; but, if anyone could have assured me that the foundations of that control would have to rest upon the Grand Fleet being based in this isolated harbor, with the men practically cut off from intercourse with the world for months at a time, I must confess that I might have been—well, somewhat less sure, to say the least. Certainly I would never have dared more than to hope that the moral of the men of the Fleet, far from being lowered by the most trying experience of the kind sailors have ever been called upon to endure, would actually be heightened. On the score of enthusiasm and ‘lust for battle,’ there could not, of course, have been any improvement, but this has given way to a cheerful, high-spirited willingness which, if possible, makes the Fleet a more efficient fighting unit with every day that passes. If you will observe well the spirit of the men of the Grand Fleet at a time when the German Fleet—based though it is in the Kiel Canal, where regular shore-leave is easy to arrange—is filled with unrest and threatened with

mutiny, I think you will agree with me the keeping of the British sailor in a healthy state of mind and body, without once letting him verge on staleness, is worthy to rank as an achievement with that of keeping the enemy off the seas.”

High Spirits.

Evidence of the high spirits of the men of the Grand Fleet I had been having from the moment I sighted the first car-load of returning-from-leave sailors on my journey from London, but the occasion on which I was the most impressed was the morning on which I was allowed the honor of helping to coal ship by wheeling 2-cwt. sacks on a barrow for a couple of hours, an experience the memory of which promises long to outlast even the not unlingering stiffness of my dorsal muscles. The ship had not been ordered, and was not expecting to be ordered to sea, and there was no reason to rush the coaling save to be free to take up some other of the regular grind of routine drudgery next in order.

I have watched warships coaling in many ports of the world, but never have I seen men working under the stimulus of extra shore-leave at Gibraltar, Nagasaki, or Valparaiso get the stuff into bunkers faster than did those lusty men of the good old “X——” that misty morning in the ———. Almost every man who was not smoking was singing, and even out of the dust-choked inferno of the collier’s holds, the beat of chesty chorus welled up in the pauses of the grinding winches.

Time and again (until I learned how to defeat the manoeuvre) men behind me in the line pushed their barrows in ahead and made off with sacks that should have been mine to shift, and time and again (until I had found my second wind and my “coaling legs”) the rollicking Jack Tar just behind me put his speeding barrow into one of my by no means slow-moving heels. The several

hundred tons of coal which went into our bunkers between 7 a.m. on that ordinary "routine" morning, was shifted at a rate that would have been entirely creditable to a crew filling their bunkers for a long-deferred homeward voyage.

I did not have another opportunity to discuss with Admiral Sturdee the manner in which the miracle of "Fleet moral" had been wrought, but an officer of the battleship on which I stayed summed the thing up succinctly.

"I quite understand," I had said, "why the physical health of the Fleet should be the best ever known—why no battleship averages more than two or three sick at a time. The long months away from the germ-laden air of the land is sufficient to

of peace, so that we are never hard put to find a field for extra effort. We learn much quicker from practice than we did from theory, and there is an astonishing amount of work going on all the time to the end that the ship shall be kept as up-to-date as possible in all her equipment. The increase of a ship's offensive and defensive power, making her better to fight with and safer to fight in is naturally a work in which the men are vitally interested, and they go into it with a will. We try as far as possible to avoid simply putting the men through the motions of work, like doing unnecessary painting or scrubbing for instance. If the ship does not provide for the moment enough real work, we try to find it ashore. For the next few days, for example, we



JACK TARS EXERCISING ASHORE.

account for that. But how, after these three years and a half between the devil, the deep sea and the Scotch mist, the men are still exuberant enough to want to push barrows of coal faster than a landsman, like myself (who is pushing for the sheer luxury of the thing), or how they are still full enough of *joie de vivre* to enjoy fits of singing between fits of coughing in the hold of a collier, is beyond my comprehension. How did you do it?"

The reply was prompt and to the point, and seems to me to disclose the secret in a nutshell. "By giving them," he said, "both more work and more play than they had in peace-time; in other words, by cutting down to a minimum the time in which to twirl their thumbs and think."

Work in War Time.

"Outside polishing brass and holystoning the deck," he went on, "there is a deal more work on a warship in war-time than in days

are sending several hundred men ashore to make roads on one of the islands. They are very keen about the change, and I have heard them speaking about it all to-day. That kind of a thing works much better than simply improvising work on board. It gives variety, and the men feel that they are doing something useful instead of simply being kept busy.

"So much for work. On the score of play, we aim to give the men rather more athletic sports than they would have in port in peace-time, though all of it has to be carried on with many less 'frills'—flag-dressings, tea-parties, and the like—under the limiting conditions of always being ready to put to sea at notice of an hour or two. On the ship, doubling round the deck for exercise is kept up regularly, as is also a certain number of Swedish drills. Every encouragement is given to the men to box, and the ship, squadron and Fleet championships in the various

classes are, of course, great events. There is scarcely a dritter or patrol-boat without one or more sets of boxing-gloves, for there is no form of sport quite as well calculated to exercise both mind and body in restricted quarters.

"Water sports—swimming, rowing and sailing—are kept up about as in peace-time, though here the long spell of inclement weather makes the winter rather a longer 'closed season' than farther south. Ashore there are several indifferent cricket and football grounds, though not, however, nearly enough for the normal demand of the great number—it runs well up into six figures—of able-bodied, sport-loving men in the Fleet. A good deal of hockey is played, and we have found it a better wet-weather game than football. In all of these sports inter-ship and inter-squadron rivalry is encouraged, principally because it stimulates the minds of so many outside the actual participants.

"Many of the officers have their golf clubs and tennis racquets, and though our links and courts would hardly satisfy the critical eyes of St. Andrew's or 'Queen's' professionals, they have been a big help to us. Cross-country runs and paper-chases, up and down the steep hills and over the soggy peat bogs, are taken part in by both men and officers, and for flesh-reducing, muscle-hardening and chest-expanding, are about the best thing we have. The tug-of-war is a traditional navy sport, for it can, if necessary, be enjoyed on shipboard as well as ashore. The great pride which the men of a ship take in the success of its team makes this also a very useful sport for its 'psychologic' value.

"Amusements pure and simple—the kinema and theatricals—are a new thing with us (at least while on active service) and the scheme is still in process of development. For a number of reasons it is impracticable for professional troupes to visit the Grand Fleet in the same way as they have been going to France to entertain the army. The greater distance is against it, as is also the fact that we have no place to put them up. Again, as there is no place where they could perform to more than a thousand men (at the outside) at one time, it would obviously take some months to make a round of the Fleet. The fact that the visitors might awake almost any morning to find themselves on the way to a sea-fight is also a deterrent. All of these things have made it necessary for us to shift for ourselves in the matter of entertainment.

"Each ship, of course, has always had its band and orchestra, and concerts and rather crude theatrical shows have been features of navy life from time immemorial. The trouble with the shows, however, has always been the amount of improvising that they entailed, especially in the matter of a stage, footlights, seats and the like. Before the war the men usually managed to find time to paint and rig 'flies' and 'drops,' devise lighting effects, and even to fix up some kind of auditorium. Here, with the whole ship standing by for orders to put to sea, all of this is out of the question. Under these circumstances, the man who first conceived the idea of a special 'theatre ship' deserves a monument as a benefactor to the British Navy.

"The suggestion was to provide a steamer on which a permanent stage, complete with sets of scenery, exits and entrances, footlights, sidelights and dressing-rooms, had been installed; also sufficient seats to accommodate as many of the crew of a battleship as could ever be off duty at one time. The thing would have been worth while a dozen times over, even if it had been necessary to detach a three or four thousand ton steamer for no other purpose. Luckily, the plan chanced to dove-tail to a nicety with the functions of a steamer which, in carrying frozen beef to the Fleet, laid alongside each ship for from twenty-four to forty-eight hours. The stage, auditorium, and the rest were built without interfering in the least with the steamer's regular work, nor have the some hundreds of performances already given aboard been responsible for the least interruption in our supply of frozen beef. As for the shows, she is discharging to the 'X——' of our squadron to-day, and you can go over to-night and see one for yourself.

Kinemas and Films.

"The trouble with the 'theatre ship' idea is that it is too long between shows. Between the battleship and the endless auxiliaries, it may easily take from two to three months for the beef-cum-theatre steamer to make the full round of the Fleet, an interval which we had to find some way of bridging with other entertainment. It was a difficult problem in many ways, and it is only within the last month or two that we have found—through the kinema—a satisfactory solution. Every ship in the Fleet has now its projector, and, through an organisation formed in London for that purpose, a continuous supply of the latest and best films is sent up and circulated at a cost to us that is almost negligible.

The films, on arrival at the depot ship, which houses the post office, are listed and filed, to be distributed to the various units in accordance with their demands.

"Each ship has a daily bulletin of the new films arriving, and at once sends in an application for its preference, with two or three alternatives should the first choice have gone to a prior claimant. The scheme has been successful beyond words. Each ship has a nightly performance, the projector being at the disposal of the men during the week, and of the officers on Saturday. All share in the cost of it, which only comes to a shilling or two per head a month. With a little larger supply of the more popular films, the development of this kinema scheme promises to give us everything we could possibly ask on the score of evening amusement. About the only thing left to do would be to buy a few picture-taking machines, let the officers and men write the scenarios, and start making films on our own account. It turns out that we're to be here another year or two, I don't doubt that's what we will be doing."

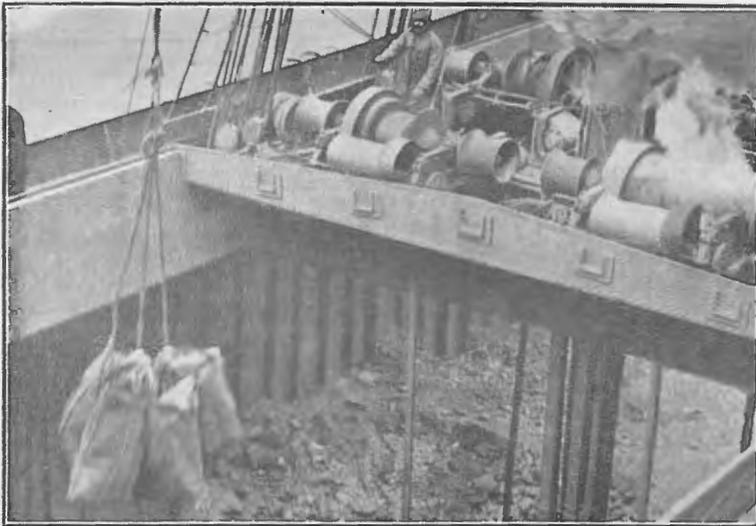
The Theatre-Ship.

There is not a great deal that I can add

burlesque. Most of the numbers had been under rehearsal for several weeks, and the whole affair went off with all the aplomb of a London revue. No "accessories"—from posters to programme—were missing, not even the censor.

An officer sitting next to me, calling my attention to the blank back of the programme, said that he had written some "advertisements" to fill in, but that the censor had banned them at the last moment as "not proper." As a matter of fact, there was far less in the whole show play by men to men, as it was to "bring a blush to the cheek" than in the average London revue. A certain "chilliness" in the atmosphere of the auditorium, due to the fact that it was situated immediately over one of the refrigerating chambers was more than neutralised by the warm reception the packed audience gave the show from the opening chorus to "God Save the King."

I managed to spend a few minutes at the nightly kinema show on several battleships. All the available seats were invariably packed, with the enthusiasm tremendous, especially for the "knockabout" pictures. Charlie Chaplin appeared to be a ten-to-one



THE "KINEMA" SHIP. THE VESSEL, IT WILL BE OBSERVED, ACTS AS A CARGO CARRIER IN ADDITION TO BEING A TRAVELLING THEATRE.

to this comprehensive summary of the way work and play have been administered with such success in maintaining the moral of the men of the Grand Fleet. The show on the "theatre-ship" that night I found well worth the wet launch trip in a sloppy sea. It consisted of two parts of varieties and one of

favorite over anyone else—both in the ward rooms and on the lower decks—and the demand for films in which he figured was a good deal greater than the available supply. The "Sentimental" Mary Pickford type of films were rather more popular than the men cared to show by their applause, but the

harrowing "suffering-mother-and-child" subjects they would have none of. A rather poor film of Rider Haggard's "She" which I saw, was very coldly received by both men and officers. The official war films of all the Allies were always sure of a rousing reception. A special treat was the picture of the King's recent visit to the Grand Fleet, which offered men and officers the exciting sport of "finding" themselves on various sectors of it. Travel films were in little demand, the reason for which was perhaps supplied by one of my coaling-mates, who said that the only kind of travel "movie" that he was interested in was the woods of Scotland running north at sixty miles an hour past the window of his homebound train.

Besides the more or less organised forms of work and play, many of the men in the Fleet have some sort of a hobby to which they turn in the rare intervals which might otherwise be spent in "thumb-twirling" and "thinking," those twin enemies of "The Contented Sailor." Thousands of men "make things"—not the old ship-in-a-bottle seaside bar ornament sort, but objects of real usefulness. One officer had become a specialist on electrical heating contrivances, and had equipped the ward room with cigar lighters to work with the ship's "juice" and save matches. Another was making his own golf clubs, and I heard of a captain of Royal Marines of noble lineage who had fabricated a very "wearable" pair of Norwegian ski-shoes. There are so many skilled artisans among the men that one is not surprised to see them making almost anything; nevertheless, the gunner of one of the battleships who—with the sole exception of the lens—made a complete kinema projecting machine, did a very creditable piece of work.

Some of the senior naval officers have gone in for stock-breeding, overflowing to the land in their endeavors to find room to expand. Pig-raising is the most popular line, and there is great rivalry between the several "sty proprietors." A certain distinguished sailor—his name is a byword to the English people—discoursed learnedly to me for fifteen minutes on the strategy of the Battle of Jutland, and then, turning to a visiting officer, spoke with equal facility, and even greater enthusiasm, of his success in crossing the "China Poland" with the "Ordinary Orkney" to increase (or was it to reduce?) the "streak" in the bacon. He called the new breed the "Chinorkland," or something like that, and if the fact that he was planning

three or four generations ahead conveys anything as to the view the navy takes regarding the duration of the war, my readers—with the Censor's indulgence—are welcome to the tip.

THE BRITISH MOTOR BOAT PATROL.

"Instead of racing for cups and shields and pendants, they now strive eternally for the safeguarding of our shores, of our food supplies—their prizes are bits of ribbon sewn on greasy, sea-stained monkey coats and the knowledge that, in the hour of the nation's peril, those who possessed peculiar experience of marine motors and motoring were enabled thereby to assume and maintain exceedingly useful positions among the multifarious units of that 'Sure Shield,' which, without relaxing, is ever vigilant against the coming of 'Der Tag,' and which, from battleship to motorboat, ever prays for its early dawn."

A REMARKABLE INCIDENT.

"There is no section of the Silent Navy, which is as voiceless as the Motor Boat Patrol. No type of warship about which so little appears even in service journals. Yet for all that these tiny craft are daily performing deeds which, in the years to come, will be registered in history as ranking with the epics of the pukka fighting ships.

"For instance, there was the motorboat who had an altercation with a Fritz one misty day, and who, through being outgunned, had to fly for her very life. She sought shelter in a secluded cove, where she anchored until the weather became more conducive to safe navigation. But scarcely had she dropped her mudhook ere she found herself proceeding out to sea again—and she couldn't see what was towing her. The crew tried to weigh the anchor, but found it impossible, so they had to wait till the weather cleared before investigating the apparent mystery. And after three days at sea—three days of slow progress, because the unwilling motorboat checked her way as much as possible by towing a couple of buckets astern—there rose to the surface the black-and-white diapered conning tower of a U-boat, who before she had time to properly make out the nature of her shadow, received a shell from the handy three-pounder, and decided to dive quickly. She dived and stayed down for another day; but, as her storage-batteries were running dry—and coming to the surface to replenish them grew a more pressing need every hour—she at length came up and parleyed. She would have unhoosed her gun had that fire-spitting Maxim allowed a man to appear on her deck; she would have disentangled the motorboat's anchor from her propeller guard if it hadn't been for the deadly skill of the three-pounder layer. As matters ended, however, she surrendered incontinently, and was taken home astern of a passing fleet collier, while the victorious motor-boat acted as escort to both tug and prize."

—J. S. MARGERIESON in "The Graphic."

Come the three corners of the world in arms,
And we shall shock them, nought shall make us rue;
If Britain to itself do rest but true.

—SHAKESPEARE.

The First Lord
of
The Admiralty



Sir Eric
GEDDES

The Idol
of the
British Fleet



Sir David
BEATTY



A SALVO.
The Guns of a Mighty British Battleship in Action.
Britannia needs no bulwarks,
No towers along the steep.



IN THE NORTH SEA. • A SNOW-CLAD BATTLESHIP.



OIL FUEL BEING PUMPED ON BOARD A VESSEL AT SEA.

Her march is o'er the mountain waves;
Her home is on the deep.

— CAMPBELL.



A HUGE DESTROYER ON THE STOCKS.



A SCENE IN A BRITISH SHIPYARD, SHOWING SEVERAL VESSELS UNDER CONSTRUCTION.

O'er the glad waters of the dark blue sea,
Our thoughts as boundless and our souls as free,



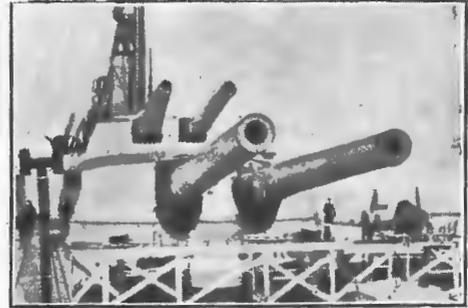
A BIG GUN READY FOR ACTION.



ANOTHER VIEW OF THE GUNS.



READY TO FIRE A BROADSIDE.



ANOTHER VIEW OF THE GUNS.



A BRITISH DESTROYER ON PATROL WORK.



A SUBMARINE RETURNING FROM A CRUISE.



A VIEW OF THE DECK OF A DESTROYER.

Far as the breeze can bear the billows foam,
Survey our Empire, and behold our home.



TRAINING TORPEDO TUBES FOR ACTION.



WATCHING THE PROGRESS OF THE TORPEDO.



TAKING IN A TORPEDO AFTER A PRACTICE RUN.



ANOTHER VIEW OF THE TORPEDO BEING TAKEN ON BOARD.



ON BOARD A PATROL VESSEL.



SENDING OFF A BOAT TO RECOVER A SPENT TORPEDO.



CADETS RECEIVING INSTRUCTION.



A SCENE ON THE MESS DECK.



THE POST OFFICE ON BOARD SHIP



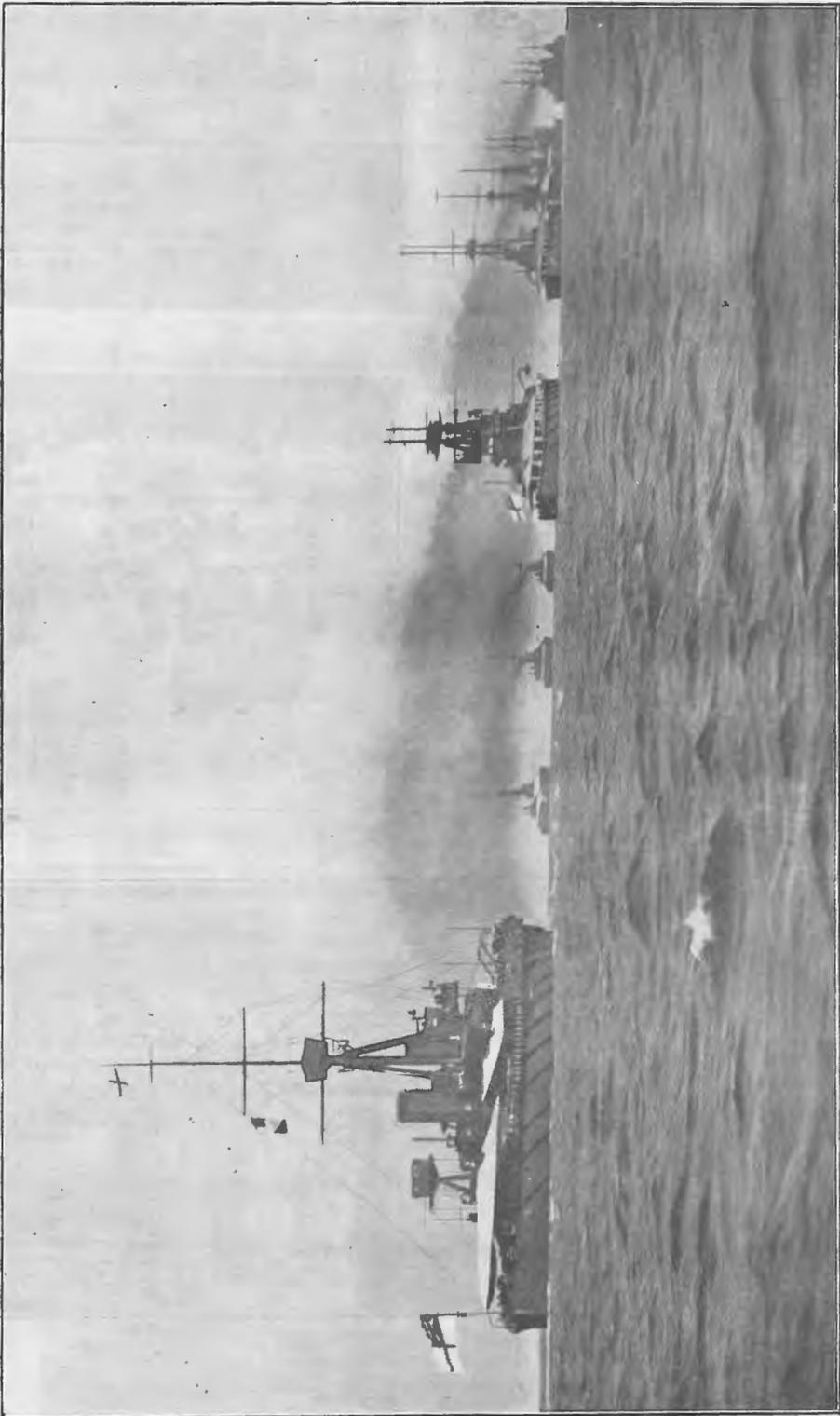
PATERS FROM HOME.



NAVAL RECRUITS AT DRILL,

We sailed wherever ship could sail,
We founded many a mighty state,
Pray God our greatness may not fail
Thro' craven fears of being great.

—TENNYSON.



WATCHING AND WAITING, WAITING AND WATCHING.

On the British Navy, under the good providence of God, the wealth, safety and strength of this Kingdom do chiefly depend.

—ARTICLES OF WAR.



LEARNING KNOTS AND SPLICES.



THE TAILORS AT WORK.



A MACHINE GUNNERY CLASS.



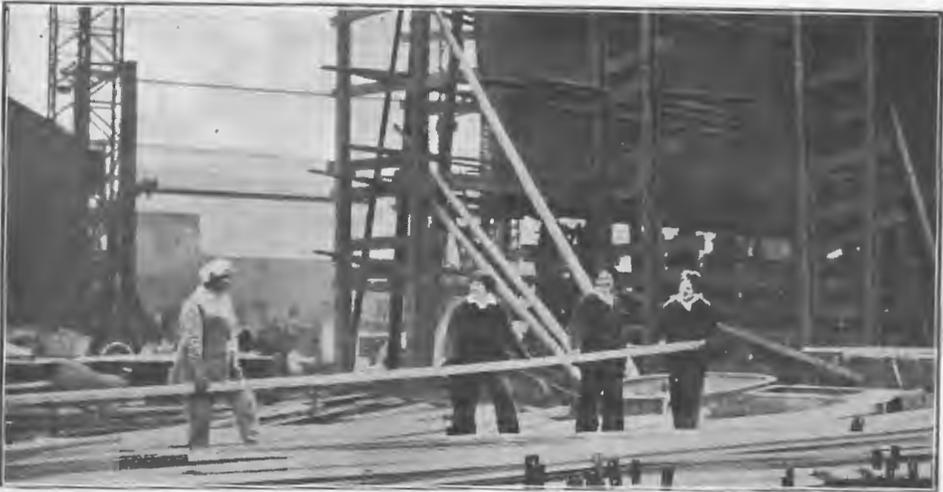
CADETS' MESS.



MUNITION INSTRUCTION.

The Royal Navy of England hath ever been its greatest
Defence and Ornament, it is its ancient and natural strength,
the floating Bulwark of our Island.

—BLACKSTONE.



A DESTROYER UNDER CONSTRUCTION. NOTE THE WOMEN AT WORK.



WARSHIP UNDER REPAIRS AT A FLOATING DOCK.



SETTING A TARGET FOR BATTLE PRACTICE.

A Chapter of Unwritten History.

(By HILAIRE BELLOC)

The greatest desire of our hearts is peace, but it must be a peace such as will justify the enormous sacrifices of the past four years.

As this issue goes to press, the fate of our civilisation and our liberty, trembles in the balance of the great western offensive.

Through the long winter which has just passed, we have watched our fortunes ebb and flow and have witnessed the collapse of our Russian Ally. That collapse was caused by a false belief in the possibility of negotiating with an unscrupulous outlaw bent upon destruction.

With less force and happily without success, similar ideas have been put forward in all Allied countries. Should they succeed in leading us to an inconclusive peace, a peace based upon idealistic theories instead of common justice, our future will be filled with the gravest dangers.

One of the most capable and clear-sighted war writers of to-day, has attempted to convey, in a novel manner, a warning of the awful calamity which might result from an idealistic inconclusive peace. Mr. Hilaire Belloc has imagined himself to be an historian living many centuries hence and writing an historical sketch of the twentieth century catastrophe and what followed.

In all his writings Mr. Belloc has proved himself a consistent believer in the possibility of decisive victory for the Allies, and the following, we believe, will assist us to face the great trials of 1918 with undiminished determination.

It is a fact well proven in many great struggles, that success is within reach when the outlook appears darkest, and "the last mile is the hardest."

The abrupt decline of European civilisation, which falls like a catastrophe upon the early twentieth century, is the most obvious thing in history. It is the cardinal point of every elementary text book and the universal commonplace even of those who have least knowledge of the past.

In its main general lines, the popular conception of this great event is the true one. After a period of increasing instability in the European States, and just at the close of their most brilliant material development two of them in confederacy suddenly forced the war upon their neighbors. That war was of unprecedented magnitude. It reached an inconclusive end. Immediately, or almost immediately, after it, there is a collapse, in which all that men did and thought, the arts, the sciences, letters, fell into an abyss. Nothing recovered. We come upon a confused period, the very few cited dates of which are uncertain, and the length of which, though it is known to extend over many centuries, is variously estimated even by the best scholars. We rise again at last into that new period of civilisation, which we at present enjoy, corresponding, after so great a lapse of time, to the old one which fell.

Those who tell this main fact of history,

even in its briefest form to our school children, and all who allude to it even in the simplest of popular works, rightly insist upon the mark of rapidity which stamped it. The other great changes which set terms to historical development cover, some of them, several generations. The most swift and fundamental, the Reformation, for instance—covered not less than the long lifetime of a man. But this, the greatest change of all, was the affair of quite a few years.

During the first quarter of the twentieth century, both the precision and the scale of human effort in Europe were at their highest. There had been a heavy decline in taste, if you will, but everything remaining to us proves not the decline but the actual increase of material power. The buildings are larger, the communications more rapid, the whole economic effort more intense, and, apparently, better founded than ever it had been before. The war and its futile ending follow.

Then there comes, in the second and third quarter of the century, that curious blank interval, of which we can make nothing; of which no permanent monument survives in any form, however ruined, and of which the very meagre accounts are so

contradictory, and in places, so incredible, that they cannot be used as a foundation for historical statement. When we emerge from this blank towards the year 2,000 everything is changed.

For a hundred documents belonging to the early nineteen hundreds, we now have perhaps one. The style has grown difficult and impoverished. Humanity has turned a sharp corner, as it were, and lost sight of its own past. There begins with the twenty-first century that long period of twilight or darkness of which, as I have said, one cannot even determine the leading dates: A ruined society, enormously diminished in numbers and reduced to the simplest form, drags itself doubtfully through the ages. The vocabulary has dwindled away to a few hundred words; forests re-arise; the old marshes are flooded again. Piracy re-appears on the sea, and, at the same time, more than one novel barbaric institution, the working of which we can hardly understand to-day, rises to support the lessened world.

So much, I say, is the commonest of common knowledge.

But if the modern student will go a little further and ask himself WHY so enormous a result was produced and that so rapidly? And then HOW it took place? He will find both these questions most imperfectly answered. I should be inclined to say, for my own part, that he will find them answered not at all, but shirked, or regarded as insoluble. Yet they are the only questions of real interest which a serious student of history can ask himself about any event, great or small. WHY did it happen? HOW did it happen?

It is worth remarking that the same difficulty in a lesser degree has been found attaching to other examinations of history. In the long past it is a complaint we continually find amongst those who study the advent of the Christian Church, of the rise of Mohammedism, or of the great change called the Reformation, that though one could see what had happened and could set down in order the steps of its progress, the explanation of it—the HOW and Why—were the great questions of all never properly solved.

Now, I do not propose to solve those questions completely in the case of this the greatest of all such problems. But recent research and the two great new monographs which have appeared in the last five years do give us at least some idea of

the process, and especially of the rapidity, with which the thing worked.

Briefly, the catastrophic nature of the result was due to a change in the character of the war, which change marked its fourth year. The great war came in that fourth year from the late summer of 1917 onwards to be looked at by the various belligerents, but particularly by those of what we now call the Western Alliance, in a fashion quite different from that in which the original members of that Alliance had first conceived it.

That is the root of the whole affair, and yet that is the point most difficult for us to-day, to understand.

All men tend to read history backwards, and forget that what are to us known facts, were to the men we are historically examining unknown future.

We can hardly conceive to-day how it was possible for men who had set out with one clear objective of overwhelming importance to change their minds so rapidly. We are bewildered when we find the very same public speakers and writers maintaining in 1918 almost the opposite of what they had maintained not four short years before. We are astonished that what are to us, the obvious and simple results of a false policy should not have been perceived by the men of the time. Every schoolmaster has had to answer over and over again the question, "Why did the Western Alliance not fight until it had destroyed the enemy?" It seems to us clear that victory was a necessity to their very life, that in a struggle of this sort only definite victory in the field could insure peace and even survival, that we are bewildered by its absence. Those who have gone a little further into the matter are almost equally puzzled by the fact that the inconclusive peace which was the root of all that followed was parleyed for just when victory was at last within the grasp of the Allies. But the fact is, I repeat, that here, as in every other parallel, though minor, historical discussion, we forget the mental attitude of contemporaries.

Three normal years are not the measure of time by which to judge the mental revolutions which took place in those three years of furnace and the future, even the immediately future consequences of their action, which are to us so plainly inevitable, were as wholly hidden from them as is our future from us.

But let me begin at the beginning.

With the outbreak of the great war, the

position is perfectly simple. You have among the various European States one, Prussia, which is not heard of in the long history of Europe until quite the close of that history. When we first hear of it, it seems to play at first a somewhat insignificant part, and only quite towards the end a curious and inexplicably large one.

During all the majestic process of European development with which we are so familiar the name of Prussia is unknown. The rise of the great European States upon the gradual dissolution of the Roman Empire, their connection in common morals and religion, their marvellous achievements in the arts, the splendid blossoming of the vernacular languages and their magnificent literature—with all this Prussia had nothing to do, for Prussia did not exist.

A Poisonous Irritant.

We do not hear the name (in what remains to us) until the eighteenth century, and then it is no more than a small poisonous irritant in the body of Europe. It produces no literature, no art, no science. We are familiar with the praises bestowed upon it here and there as a military organisation, but even that is broken in what may be called the Augustan Age of Europe, when the triumph of the French Revolution seemed to have achieved a permanent, settled, and superior form of civilisation to all the European peoples.

Then suddenly, in the lifetime of a man, we find that organisation suddenly rising to predominance. It becomes the master of the German tribes, inspires them in what is to us an inexplicable belief in some fancied superiority of their own. We have extravagant allusions to German music and to German philosophy—German everything—which are to us to-day unintelligible. We have the much more solid facts of the three nineteenth century wars, which end by the establishment of that ephemeral and unreal thing called for a generation "the German Empire," and meaning, of course, the Prussian establishment of the northern Germans.

We see this novel and artificial thing rapidly drawing into its orbit the whole of central Europe, and then quite suddenly and unexpectedly like a whirlwind, it looses the great war.

The men of the time—I mean the men of the moment in which the great war broke out—were perfectly clear upon either side of its nature and objects. Of that there can be no possible doubt. There is no

phenomenon in history so clear cut or so simple.

This novel, and as it was to prove, ephemeral power, which is no more than Prussia writ large, proposes to impose itself by conquest as the chief of all Europe.

We may ridicule, as all historians do ridicule, such a pretension. It seems monstrous in its proportion between means and end. It was monstrous. It was based upon a foolish and even vulgar illusion. But of the strength of that illusion there is no doubt at all.

Not only the leaders of the new German Empire with its Allies, but the whole mass of its people—all those who wrote for it—all those who boasted of it—all those who framed the policy—maintained without qualification at once the possibility and the necessity of a war with conquest. The only question apparently debated was the moment best fitted for the inception of such a war. The curious have unearthed a protest or a misgiving among some of those who were subject to the directing force of the new power. But those protests or those misgivings, so far as contemporaries were concerned, were quite insignificant. They passed unnoticed in the mass of affirmation which was the note of the whole time. We shall not understand that time at all, nor be just, even to those who provoked so decisive a calamity, unless we appreciate their point of view, and note that it was universal among them. What is clearly in the general light of history a vulgar and uninstructed pride, was, in the eyes of those who suffered from that folly, a simple truth.

They thought that the new State, being far more than the mere equal of its neighbors, was unduly circumscribed, that its strength merited and could obtain far more than the general arrangement of Europe had granted it. They were completely confident of success in any enterprise against no matter what combination the older States might erect for their own defence, and, when the war was launched by the Prussian Government, it was launched without any shadow of doubt in the minds of the aggressors, that their aggression would be justified by success.

Steps Toward War.

Here the modern student will question our conclusions. He will say that it was not possible for any people living to misunderstand the position so completely. The simple fact is that they did so misunder-

stand it. In the same way one might have insisted that the Papacy of the sixteenth century could not conceivably have misunderstood the situation of Europe when the Reformation broke out. It is a matter of plain, historical fact that the Papacy, with all its information, did so misunderstand it. If proof were wanted it would be amply afforded by one detail of general policy undertaken by the new power. I mean their building of a great fleet to challenge the naval superiority of Great Britain. That act which—even if we knew of no other—would determine for us the monstrous miscalculations under which they suffered, is conclusive.

But apart from that, you have a most illuminating series of incidents the few years before the war. The Prussian Government had before the war upon four separate occasions, challenged the power of defence of those whom it threatened, and upon each of those occasions those whom it threatened had given way.

Such yielding was unwise, but it had taken place; and we shall quite misunderstand history if we do not appreciate what the effect of these surrenders was upon the Prussian mind—consequently, upon the German mind. We represent them today in history as some motion before the storm; mere indications of what was to come. But they were more than this to contemporaries. We see them crowded into a few brief years, which are, for us, the preparation only of the great calamity. They read each of them in turn as a successful effort to ward off that calamity by compromise.

The English and the French had permitted Prussia and her Allies to challenge the Russian Empire in the Balkans by the annexation of Bosnia and Herzegovina. The French had allowed a direct interference with their domestic affairs, and twice on a threat of war from the Germans had given way. First in 1894, when the elaborate system of espionage established by the German Embassy in Paris was exposed, and afterwards when M. Delcasse, seven years afterwards, resigned at the dictation of this Foreign Power.

Great Britain, it may be said, had not gone so far in compromise nor yielded so conspicuously to the increasing insolence of the new claims. It is true that Great Britain had not suffered any humiliation so direct as had been suffered by the Governments of the Russian Empire and

of the French Republic, but Great Britain herself had attempted more than once to parry the threat of force by accommodation. Missions had been sent to propose some proportion between the two fleets and those missions had been undertaken on the initiative, not of the threatening power but of the power threatened. Up to the last moment those who had the most experience of British policy, and who were in the best traditions of the past still hesitated to admit the issue. Even after the ultimatum was issued to France, it was hoped that war might be avoided, and almost the last acts of British statesmen before war actually broke out, were acts temporising with the force that was upon them.

In the summer of 1914 itself we have upon the one side of the great quarrel a perfectly clear conclusion. The subjects and the Allies of Prussia were determined upon war. They were determined upon a war which they were certain would be victorious and brief. They were determined upon a war for which they had chosen their own moment. They made in the eye of all Europe a great levy upon the national wealth of the German Empire long before the first blow was struck, and they openly called that levy a preparation for war. They abnormally increased their already gigantic military forces and their press, the speeches of their public men, all the pronouncements of their historians and their universities—the whole of their national life—showed that such a war was at hand.

The moment chosen for striking the blow was that obviously the best suited to the aggressors. It was the moment after the harvest of 1914, and, as we shall see in a moment, the method of that aggression pre-supposes its being planned for a particular hour and in a particular fashion.

On the other side, the situation is equally plain. Those States of Europe against which the aggression was designed, notably the French and the Russian, were not only upon the defensive, but in a sort of bewildered expectation, which clearly failed to grasp the magnitude of the peril.

The congeries of force against which the superior force of Prussia was about to strike were not co-ordinated. The Government of Great Britain had been at great pains to avoid anything like an alliance or anything like set terms, and even within the country most menaced, which was that of France domestic discussion of an acute

kind were permitted to confuse the public appreciation of what was toward.

Misleading Views.

If we ask ourselves the reason for this confused and unprepared situation on the side of what became the defensive Alliance against Germany, we can arrive, though with some difficulty, at an answer. The nations to be united against the Prussian aggression were very disparate. Of the Russian Empire, its simplicity of political texture, its complexity of race, of religion, and provincial traditions, the West knew hardly anything. It would astonish a general modern reader, I think, to come across, in detailed study, as the professional historian must, the thousand indications of this ignorance. We have it on record, for instance, in a contemporary biography, that the master of a famous college in an English University, a very learned scholar, a man of good European position, was ignorant that the Russian authors wrote their books in the Russian language, believing French to be their ordinary medium! We have it also upon record that a public man of eminence and not unlearned in history, whose whole career had been spent in parliamentary discussions with the chancelleries of Europe, conceived of Poland as a nation provincial to Russia, and was ignorant of the Polish elements in the German Empire.

All this may seem fantastic to us to-day, and so in a sense it is. But to the Europe of 1914 things were so, and of Eastern Europe (save where it is touched on the Mediterranean) of the Slavonic civilisation and of what was meant by the general term "Russia" as a whole, even the educated West was profoundly ignorant.

Again, those who were to be the chief champions in the fight—the French and the English—though closely linked, of course, in history, and, indeed, enjoying a common origin and institutions and culture, had been for centuries natural opponents of one another upon the European field. Each still lived to some degree in the old traditions of the time, when the French monarchy and the English aristocratic commercial policy were the only two considerable forces dividing the European field between them. And in the hundred years preceding the Great War, these two neighboring nations had grown to know, not more, but less the one of the other. The knowledge of French literature which had been, during the eighteenth century, part

of English cultivation, had largely died out among the educated classes of the nineteenth century. While the conception formed of England in the French mind during the latter part, at least of the nineteenth century, was one quite different from the reality—a sort of simplified picture of what the middle class alone in England may have been in the days of the Reform Bill and of the early Victorians. There was no sympathy between the two in any detail of domestic or political life. Parliament was the great traditional and national institution of the one. In the other it was an exceedingly unpopular usurping oligarchy. The immense religious quarrels of the French were incomprehensible to the English. Nor is anything commoner in the domestic documents of the times than the expression by Englishmen of astonishment that the Frenchmen should betray extreme emotions in the matter of theology or upon the part of the French that the English should seem so indifferent to their debates of religion.

In other words, the union between all three parties of what was to become tripartite resistance to the Prussian challenge were elements distant in various degrees one from the other, and morally separated the one from the other.

In this separation it would be foolish to omit the immense effect of distance and physical isolation as between Russia and the West of Europe, of language, interests and the conflict of commercial and colonial policy as between the two Western Allies.

In a word, the character of the resistance which Prussia was about to encounter was marked simply by the conception of defence. The Alliance against Prussia was brought into being solely because Prussia was about to challenge. It was cemented only by the action of Prussia. And it is true to say that even during the first year of the great war, or at any rate during the great part of that year, the moral cementing of the Alliance against Prussia took place slowly and was in a great measure effected by Prussia herself.

The novel, startling, and terrifying atrocities of which that power proved guilty did more to consolidate the resistance against her and the alliance in its various parts than anything proper to those parts themselves.

We say, then, that when the great war was launched, there was a clean-cut division between those who were to be the belliger-

ents. On the one side the Central Powers, organised by and dependent upon Prussia alone, with one word of command running from the Lower Danube to the Baltic and from Metz to the frontiers of Roumania, set out for a brief war of conquest, in their eyes inevitably successful (for every calculation was in their favor), and necessarily resulting in their capture of the Near East, their domination over the smaller Slav States, and the reduction of the French to a secondary position in Europe. Upon the other side stood, at the outbreak of war three disparate powers, France, Russia and Great Britain (the latter of which was not a certain factor in the Alliance until mobilisation had already begun upon the Continent), and the purposes of that tri-partite agreement between the three such different partners was the comprehension of the conclusion to which the Central Powers aspired, and the preservation of European tradition and national independence.

Attitude of Defence.

This attitude of necessary but imperfect defence was as clear and as universally admitted as was the attitude of conquest upon the other side. It is rare indeed in European history to find any conflict so simple in its issues. Even in the case of this one, afterthought led to the attempt of confusing the issues, and even to a forgetfulness of those issues, as we shall presently see.

It began to be said, for instance, on the side of the Central Powers, that though they indeed had launched the war, yet morally the guilt of it lay on their opponents for having cramped the expansion and legitimate ambitions of the Germans. It began to be circulated later in the campaign by the friends of the Germans in the Allied countries and by interests neutral in their sympathies and desiring only peace, that the whole tragedy was the result of some obscure misunderstanding which they made no attempt to define. But these confusions of the issue are negligible to the historian, and, indeed, take very little place in any historical discussion, because they are manifestly unreal.

The refusal of all negotiation, the terms of the original note to the Serbian Government, the universal popularity and acclamation of the war among the population of the Central Powers, the hesitation, tardiness and unpreparedness of the Alliance construction against them, all tell the same tale.

Under these circumstances, the tone of

thought and the public expression of it to be discovered at the beginning of the campaign in France, in England, and throughout the Russian Empire, was various, while through the German speaking part of the Central Powers it was homogeneous and fixed. In Great Britain the mass of men had not thought themselves near war at all. It came as a terrible and most incomprehensible surprise. The effort of the nation was therefore limited at the very first, but the energy developed rose in a very rapidly steepening curve even during the early period, when reliance was placed upon merely voluntary action in every department of the national life. Further, it was but natural to the academic or teaching classes, for they had been trained in the universities not only to a profound admiration of Prussian Germany, but to think that they were themselves part of an imaginary and noble "Germanic race," the origin of all good things in Europe; such was the curious pedantry of the time.

In France, the intensity of domestic discussion, especially the passionate interest taken in that country in religious divisions, and further, the power of a small but very well organised group of Socialists with international theories to defend, somewhat divided opinion, although the mass of the nation was firmly and determinedly fixed upon victory against a detested enemy.

The numerous races and creeds united under the autocratic crown of Russia, regarded the war at its outbreak with every variety of emotion. The great Jewish community, numbering many millions, mainly German in speech and naturally sympathising with German culture, were at one extreme. The orthodox Slavs, especially those of the wealthier classes who had come into contact with and had nourished an old antagonism against the Germans, were at the other. The Poles considered only their chances of freedom in the result from the misgovernment both of their German and Russian oppressors who had destroyed their independence.

The Baltic towns were largely German in tradition and government. The Finns stood apart.

In a word, the Alliance was disparate not only in its national traditions, but in the texture of opinion with regard to the war.

In the West this state of affairs very rapidly changed. Immediately upon the outbreak of war the Germans committed what was then in the eyes of all European

tradition and morality a sacrilege. They violated neutral territory. There immediately followed unheard of and abominable massacres of civilians, and the public proclamations by the Germans that this vast expansion of methods already introduced by them in 1870 was to be regarded as their normal method of war.

Western Solidarity.

That disunion of tone, of which I have spoken, changed at once in the West to a complete solidarity of opinion. With the exception of a handful of individuals, some of whom were manifestly mad, and one or two clearly the agents of the Central Powers, the whole mass of the British and French populations became determined not only upon the complete military defeat of their enemy, but upon his thorough chastisement, disarmament and reduction to impotence. Public men proclaimed this end as the necessary, and, as it were, the obvious objective of what we call to-day the Western Alliance. It was a thing no more to be discussed than the necessity of putting out a fire or of arresting a murderer. It was perceived as clearly as we perceive it to-day in the light of history, but of course with less detachment and under the spur of fierce patriotic passions, which we do not share, that the life of Europe itself was at stake.

The great victory of the Marne, the classic example of strategy in the warfare of the old world, was won at the beginning of this process. The Central Powers, reduced to the defensive on the West, had clearly lost their chance of conquest, and their doom to complete and decisive military defeat was taken to be only a question of time. The virtue required for its achievement was nothing more than the virtue of perseverance.

This conception was, as we know now, perfectly sound, both in strategy and in politics.

The time required for the process of victory was not known. But that it was limited, and that the process itself was inevitable was clear.

The enormous latent resources of Great Britain were developed with astonishing rapidity. Within a year Italy had joined the Western Alliance; and if the hopes of rapid termination were somewhat exaggerated, the main truth that time was the necessary factor working for the West against the Central Powers was clearer than ever.

For two years, and, indeed, for nearly

three (a period that seems to us astonishingly short, but which bore a different aspect to those undergoing the strain) the mood I have described remained unchanged. The blows delivered were continuous and increasing both in vigor and effect, and the process of slow victory uninterrupted.

Upon the East it was otherwise. The Eastern front was not industrialised, and some historians of authority maintain that the political as well as the material factors at work there made for the success of the Central Powers. At any rate, upon the East that success appeared. Lack of munitionment compelled the extensive but well conducted retreat of the Russian armies. The German and Austrian forces occupied the whole of Poland. Bulgaria joined them and the Balkans fell into their power. They supported their Turkish ally meanwhile with a considerable measure of success.

But the fate of the war manifestly depended not upon any event in this ill-developed eastern region, but in the fate of armies in the heart of European civilisation where the defensive line of the Central Powers was held anxiously and with increasing difficulty from the Adriatic to the North Sea.

It was in the fourth year of the war that there took place that development in opinion which has been so little understood by historians, and which is yet the key to all that followed.

I would insist upon it particularly, for I believe that the comprehension of its causes makes clear what has hitherto been inexplicable, and blind in the history of our race.

A small minority at first, but an appreciable one, formed of very different elements, began to regard the whole struggle in a novel and what is to us at first sight, an incomprehensible fashion. This minority took as its postulate, consciously or unconsciously held, the impossibility of decision. Not a few men whose names have long been forgotten, but who were famous at that moment with a curiously ephemeral fame of popular leaders, men who had for three full years seen the problem clearly and defined it with accuracy, changed their tone, discussed the nature of an approaching peace by negotiation, argued the necessity of arriving at it, and took for granted in all they said—most of them sincerely—the existence at the conclusion of the war, not of a humbled and defeated opponent, but of an opponent still strong, still their equal—yet innocuous! What was really extra-

ordinary under the circumstances (but the folly of judgment upon the future is the most frequently repeated of historical phenomena) they seemed to regard such an arrangement as final and satisfactory.

Let me put briefly before the reader the causes of so singular a conversion. For though it had taken place in the minds only of a few, it struck root and spread.

There was, in the first place, the interest of finance. A short war, followed by the compulsion of the defeated party to repair economic damage, would, indeed, have ruined one group of European financiers, but would, if anything, have enriched the other. Such a war would, again, have left the leaders to the victorious party secure of their repayment and interest without any very prolonged prospect of crushing taxation. A secure peace once established, the production of wealth would have caught up the debt involved by the destruction of so much during the fighting, and it is even probable that a great expansion of economic energy would have followed—as it followed upon the Napoleonic wars a hundred years before.

But after the three years of war, it was clear that the power to repay voluntary advances made by the wealthier classes was reaching its term, and that nothing but prolonged and very heavy taxation of accumulated wealth would be necessary to achieve the end.

Now, the financial interests of that moment in Western Europe were largely cosmopolitan and largely indifferent to national feeling, still more indifferent to the European traditions which had inspired the defence against, and after the defence the approaching victory over, the Central Powers.

That was the first and main cause of this new spirit—a most powerful one. Though the individuals concerned were few, they enjoyed a great command over the press and over certain sections of the politicians, and that their action was secret was an immensely strong asset in their favor.

Policy of Silence.

Next there must be noted as a cause the necessary silence adopted by all the commanders with regard to the progress of operations. The perfected system of espionage in a degree quite unknown in earlier wars, the essential value of surprise, the very ease with which news could be rapidly communicated compared with the conditions existing before the scientific discoveries of the

nineteenth century, made the policy of silence necessary. But it undoubtedly had, with all its obvious advantages, one great defect, which was to destroy or to delay those vivid impressions upon which the military spirit of a people is supported under the strain of a great conflict.

Next we must allow as a cause that permanent division between technical and instructed military opinion and the vague miscalculations and ignorance of the civilian population upon military affairs. To the soldiers of the higher commands nothing was clearer than the rate of attrition and the fact that attrition would decide the campaign. To the civilians this truth was never clear, and we must perhaps in some degree blame the Governments concerned for failing to emphasise it and to publish frequently the statistics which would have made it familiar even to the popular eye. It was natural indeed that the Central Powers in their increasing anxiety as the end approached, should have concealed such figures, and should have tampered with their official lists, but there was not such necessity for the Western Alliance. The fault was one of mere routine and negligence. It was easier not to undertake the work necessary for such a propaganda, and it was not undertaken.

Lastly, we have that universal factor in history, the human conception that the future will resemble the past. Its result is to us to-day the most astonishing of the many astonishing features in an attitude which so many have found inexplicable. Men of the highest cultivation, and of considerable interest through their writing, actually believed that a conflict of this kind, ended by the salvation of the Central Powers and their remaining strong and organised for war, would have for its issue the old conditions of European peace!

I have said that this change of opinion was confined to a small minority. The armies were quite ignorant of it, and acted as though it did not exist. The great mass of the people remained with a sound instinct, as determined as they had been throughout the whole previous forty months of the struggle. But the seed was sown, and especially among the articulate minority among the warring nations, it bore fruit and spread.

I am here at a point where a tracing of historical causes is at fault. Why the Governments concerned allowed it to spread. The exact channels by which its activity

was conveyed; the form of its final success—all these are impossible to trace. All we know is that during the winter period (months of exceptional strain compared with the warmer months, and of necessarily diminished activity in warfare), what had been the confined error of a few—though these few were powerful—grew into a very considerable body of opinion.

Here, again, we cannot say, any more than we can say in the case of any other great movement of humanity, how large was the body which, at the end of the movement, had this spirit. It is probable that it remained the spirit only of a minority, though of a large minority, even when it finally achieved its purpose.

The Peace of Berne.

Whatever the causes developing this false opinion may have been, it achieved a strength sufficient to impose at first a public parley, next a partial truce upon certain portions of the various fronts, next a formal interruption of hostilities and lastly that monument of vanity which every succeeding generation has always cited as the type of an empty document—the Peace of Berne.

We all know the terms of that document, if only because it is the butt of everyone who contrasts reality with fine phrases. One may truthfully say that this tremendous epoch in the story of our race contains two classical points. First, the military point of the Marne, to which I have already alluded, the second the philosophical or political point of the Peace of Berne.

If paper declaration could do what alone conviction and action can accomplish, the Peace of Berne would have been the foundation of a new and happy era. If unpunished crime could disappear without consequence, and if the prime laws of human morals were other than they are, this instrument might have been cited (as nearly all its contemporaries would at first cite it) for the great creative act of human history, inaugurating a new world.

Its first principle, stated immediately after the preamble, was universal disarmament; its next, the universal liberty of government, established upon the popular will. Frontiers, no matter how complex or geographically impossible, were to be established after a most elaborate consultation of resident populations not only by numbers, but by interests and classes as well, and occupations as well.

Indeed, we note with curiosity the thoroughness of the intellectual work put into

this piece of composition, and we half admire the industry which must have gone to the defining even of the least among its innumerable details!

Nothing was lacking. The freely elected conventions that were to settle every problem from the fundamental one of proletarian discontent to the no less fundamental religious debates which had divided Europe, was weighed, and the scheme of its settlement announced.

It failed more thoroughly, and, if we may use the word in so awful a connection, more comically than any one of the thousand similar though less experiments which history can show, and the reason of this necessary failure should have been clear enough, one would think, even to the intellectuals which were responsible for its actual wording. There was no one to carry it out.

The great war had established precedents of murderous offence by sea and land, the authors of which had suffered no punishment. It had taught in its conclusion one of those practical moral lessons which have a real power over the mind of men very different from the presumed power of documents—the moral lesson that high material organisation, preparedness, and a determination to achieve had proved, in trial by battle, the sole guarantees of success in human effort, no matter how vile their users.

It had left Europe convinced by practical example that no sanctity would stand against a properly prepared material force.

A recluse at the time, bitterly opposed to this impotent conclusion, wrote to a friend in a letter which has come down to us, an inverted religious phrase, which sums up the disillusion of that moment. "There is no God, to judge the nations." Every conflicting interest in Europe from those of possessors and non-possessors to those of clerical and anti-clerical, every conflicting necessity of race, opinion, philosophy and tradition, had learned to depend on that very factor which had been eliminated by the empty words written down in the reception room of the Swiss Parliament House.

Arms in some form or another became the only appeal. An armament of one form or another became the universal test and the universal effort.

Manifestly in such a chaos (the inexorable result of a moral falsehood) the old civilisation was doomed.

At first, for a very few months, men lived under the illusion that the compact could

be kept. Then within two years began the re-armament (first of the smaller States) under a disguised form. In the attempt at combined action against these, the intimation was difficult to frame, the process was slow, and the wholly artificial alliance of those who were yet strong was accompanied by a very real subterranean intrigue on the part of each for the support of these new small forces.

The crisis passed, but uneasiness remained.

The next few years were filled with alarms. At the first talk of differences, ports were closed, the elaborate and now fully developed system of passports was made even more stringent, an army of secret police, spies and counter-spies in each country were set to work, the press was censored, and the magistrates instructed to strike terror. Worse than this, every such rumor destroyed, especially in nations dependent on import, the stability of the markets.

It was not long before the various designs for covering what was really a new armament came to the surface and were first tolerated, then denied, then accepted. Before those who had left the ranks of the great war were middle aged, fully organised competitive armaments upon such a scale as the past had never seen, were pulling yet lower the rapidly declining economic forces of the European States. Had the problem been confined to international rivalry, some sort of tragic solution might have come at last in the conquest of all by one, and in the survival of the victor as master of the European field. But even this was not permitted. Humanity had learned its lesson that force was the remedy, and that evil sufficiently armed could always survive, that the crusading spirit was an emotion that could be worn down, and that any appetite sufficiently strong could make a bid for power.

Much of the greatest unresolved strain of the time had been the permanent quarrel in the industrial countries between the possessors and the dispossessed. Each armed. The armament was secret and imperfect, but it was equal upon either side.

Inevitable Ruin.

There had remained from the great war this permanent impression upon the mind of the masses in the great towns; that they had been sent into a slaughter which had proved useless, that they had sacrificed all for nothing. Someone must be struck for so abominable a disappointment. A motive

of that kind added to a necessary antagonism between wealth and poverty was the motive power of what followed.

The issues of the civil wars, which were local, various and turgid, we cannot follow upon any general scheme, so confused is the chaos, and so dark was that very rapid material decline of which we have now spoken. The first great famine (it is significant to note), the first famine in which so many died that the records are imperfect, took place not forty years after the signing of the Peace of Berne, and at a time when very many men still lived who had fought through the great war and suffered its final disappointment and the futility of its conclusion.

The first to be sacrificed in the turmoils which had filled these forty years were, as invariably happens, not the scoundrels but the blameless fools among those who had labored for an illusory peace. Their fate was a mixture of resentment against deception and of another must stronger element, which is the anger of the populace against assumed superiority.

There is a curious little phrase, emanating we do not know whence, but preserved to us after all these hundreds of years by the chance survival of a piece of lead (mixed with some alloy) which it is believed was used in those days in the art of what was called printing. The letters are those used in England, and experts ascribe it to the earlier days of the great conflict. It is evidently the title or foreword to some work, and the words run:

“THE WAR THAT WILL END WAR.”

—Land and Water.

RUTHLESS RHYMES FOR MEN OF THE AIR.

Horace on a B.E. 2c.

Eloped one night with cousin Lucy;
He did not wed that daring wench.
They landed in a German trench!

Fritz, upon his Gotha Raider,
London for a bee-line made-a;
Empty now is Fritz's garage.
Have you seen our A.A. barrage?

LIMERICKS.

Large and marvellous is the Caproni,
Even young ones appear over-growni.
If they get any bigger,
What price the poor rigger!
Unless they are braced by Marconi.

Whilst rigging a 'bus, an A.M.
Said, "Golly, this 'bus is a gem,
Gott strafe its designer,
I cannot align 'er,
I must wangle the angle pro tem."

The Submarine Destroyer

By ERNEST OSBORNE

(Specially written for Sea, Land & Air)

The food-hunting albatross swung majestically over the long, sunlit ocean swell, where, here and there, a grey cats-paw darkened the heaving undulations. With grey wings held motionless and snowy breast gleamingly reflected in the calm water, the herald of the approaching southerly slowly turned his short neck and the hard brown eyes above the pale-grey beak attentively swept the surface for prey. He had seen Cape Hawke on the New South Wales coast that morning and had stood out, South-south-east, in his quest for food.

Suddenly, right under him, the water parted. A dark-grey form with flat top whereon rose curious superstructures, sides half-round and with ends, unlike his friend, the blunt-headed Cachalot, tapering to graceful wedges, floated low on the swell. With a hoarse croak of fright the startled bird twice beat the air with its great wings, and in that moment vanished.

A door in the superstructure, where no door had been visible, opened, and a heavily-built man with brown hair greying on the temples, stepped out, holding, carefully, a sextant in his right hand. The steady blue eyes in the sun-bronzed face scanned the water, where the swell from that low elevation ran in menacing hills toward the craft. Close behind him came another much sparser-built man, younger in years, but with temples greyer than the older man's, a narrow, somewhat pale face, and grave grey eyes. The grey-eyed man also held a sextant and both men looked simultaneously at the sun.

"Get your wire-less mast up as soon as you like." The older man spoke down through the door in the superstructure.

Instantly the slender telescoping tubes rose from their grooves in the deck, and flung thread-fine shadows of delicate tracery on the blue-water. The blue-eyed man pushed the cap back on his head and focussed his instrument on the horizon under the sun through sight-vans and ho-

rizon glass, fingers deftly adjusting the shade before the central mirror, moving the index and turning the tangent screw to clamp the index. With a few seconds interval the men read the vernier on their instruments, glanced calculating at the sun and leaned back against the midship structure.

"As I was saying" said the blue-eyed man, "it serves no useful purpose to cry that the submarine is being put to a criminal use. All the talk in the world won't stop an enemy who has lost the whole of his merchant marine from attacking his opponents' merchantmen. The submarine is just a weapon, and has therefore to be met with another better weapon. Torpedo boats and other on-the-water craft are useful in certain combinations of circumstances, but the only really effective weapon must be the submersible submarine-destroyer—a craft, swifter on the surface than the best type of submarine, able to follow the submarine under water and by superior submerged speed overtake and destroy the trade-destroyers. Fitted with my radium power-generators we have the advantage in smallness of size and superiority of speed. You have seen me turn this our Australian Submarine-destroyer I, at full speed under water with an abruptness that would break the big 'Unterwasser' in two. Our new under-water equipments and ramming powers will surprise the first submarine who has the evil fortune to test them, and our wireless telephony, above and below water, enabling us to hear without being switched on to the speakers, will keep us well enough informed."

The grey-eyed man looked gravely at the ventilator-shaped underwater sound-receivers on the deck.

"If our information is correct you will have your ideas thoroughly tested before we are very much older," he conceded. "I am a trifle surprised that Our Folks are

giving you a trial. They are not as a rule easily convinced," he added with a faint smile.

The other laughed.

"I am persistent if I am anything," he said lightly, and again focussed his sextant. The younger man looked up from his instrument. The big man nodded.

"Eight Bells!" the other called, and the

leaned over the table and gently turned a screw on the regulator.

"Yes, we'll pick up Cape Hawke day-after-to-morrow," said a deep voice so close in the listeners' ears that the grave-eyed man made an involuntary motion.

"If," suggested another voice, "submarines have no say in the matter."

"I know what I'd do if I was twenty



ASCERTAINING THE VESSEL'S POSITION AT THE PERISCOPE OF A SUBMARINE.

silvery strokes came tinkling from the interior of the destroyer.

"I have caught somebody speaking, sir," came the voice of the operator from the tiny room. The two men hurried below, and an anaemic-looking youth handed each man a receiver. At first the only perceptible sound was a pleasant buzzing, but it changed presently to a confused medley of voices. The blue-eyed man

years younger," asserted the deep voice acidly. A slight pause followed the assertion. "I'd be on board a fishing-smack upwards of twelve thousand miles from here sweeping for mines and catching submarines."

The listeners heard no reply. The commander of a Californian liner is not usually contradicted when rebuking subordinate brass-buttons.

"Keep a sharp look-out," the deep voice added, and the men on the destroyer heard measured steps descending a bridge-ladder.

"Oh, Captain!" a feminine voice screamed, prettily pleading. "You must join us in a game of deck-billiards, but please concede me the highest part of the deck. Your superior practice and skill will enable you to push up-hill much more easily than I can."

"Oh, d—o—n't, George!" came, reproachfully, from some secluded part of the liner's decks, and the men laughed and hung up the receivers.

"The rest," said the grey-eyed man whimsically, "is of no interest to anyone but 'George.' You think it is the San Francisco liner, sir?"

"Undoubtedly. And by the commander's own word we know her position. One of the uncertainties of wireless telephony is the difficulty to determine your exact distance from the speaker when only listening and not in direct communication with him. That liner-skipper will rely on his speed and on the patrol-boats to keep him out of trouble, but his chances are slender. The 'U' boats seem well posted in the movements of the bigger game, and where the liner makes landfall the enemy will await his coming. There, also, is where we will wait, ready to take a hand. Half speed ahead!"

A faint rythmical throb ran through the vessel and the cantilever frame of the little destroyer vibrated, but not unpleasantly. The two men again entered the observation-structure and watched the wedge-shaped bows slice through the water. Parted by the cleaving wedge, the brine hurried out and away from the churning wake in two thick double weals. Abreast of the forward torpedo tubes the bow-waves hollowed into a deep trough, rising again abruptly abaft the hollow, higher than the deck. As the larger of the ocean swell raced the rushing destroyer the ridge behind the hollow ran with a musical swish over the deck, recoiling in miniature cascades from the base of the superstructure.

"Except for the absence of noise, it reminds one of a turret-built cargo carrier in a seaway," said the blue-eyed man reminiscently.

His companion nodded.

"I have never been in the Merchant Service, but, knowing the construction of turret ships, I can imagine it would," he replied. "I went through the college and

the usual trainingship-destroyer routine until the submarine activity attracted attention, when I was detailed to the submersible section. Then came our search for something effective to combat the Unterwassers—and here I am, now," he continued as if in explanation, and looked at the periscope reflector. "And there is Cape Hawke showing up."

"We will submerge, approach the coast under water, and see what is doing." The doors closed, the light of day changed to the white light from the electric bulbs, and the vessel moved onward with little perceptible motion other than the feel of the powerful forward thrust through the water. Attentively the men listened at the sound-receivers to the steady pulsations softly hammering at their eardrums.

"Water has an irritating way of cutting sound in unexpected directions," grumbled the burly man. "Now, what do you make of that sound?"

The naval man considered, gravely.

"Apart from the fact that it is the beat of propellers it tells me nothing," he admitted.

"By the rapidity of the thrust it is a small, single-screw craft. Listen——! A large, full-powered vessel would hit the water more measured and duller thuds with her blades. She can not be far off either. Anyway, we are going up to see who she is," decided the big man.

As the periscope pierced the ocean surface there came to the astonished observers an oath followed by a startled exclamation.

"Good God! A murdering submarine! Over with your helm—quick—and I'll ram her!"

Less than fifty yards from A.S.D. 1. wallowed a queer-looking little wooden steamer. As flung onboard to accelerate departure from a North Coast Bay-harbour the hurriedly stowed hardwood timber cargo rose unevenly above the low bulwarks. Abaft the little bridge, side by side, two slender black-painted funnels rose in puny importance. On the bridge a stumpy, red-faced man with consternation in his face and grim purpose in his eyes had sprung upon the little steering-wheel, and, tearing it from the helmsman, was tugging it hard to port. Swiftly the burly man in the destroyer leaned across and snatched at a lever. Promptly the destroyer dropped be-

neath the surface, rolling, as she submerged, heavily to the drag of water as the little timber drogher surged over her.

"Blast that mud-ticket skipper!" snapped the naval man savagely. "He all but rammed us that time! He might have looked before he made for us."

The blue-eyed man laughed lightly.

"Yes, he very nearly bagged Australia's own submarine-destroyer," he agreed. "All the same, he has earned the A.B.C. or whatever it is they give merchant skippers for ramming submarines."

The Southerly heralded by the peregrinating albatross sang lustily over white streaked surges, raised by his bitter

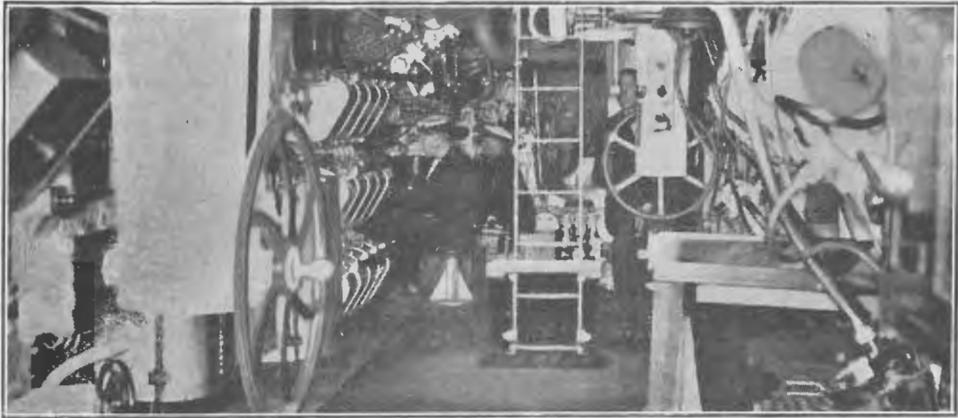
naval man looked graver. The blue-eyed man smiled, but the steady eyes were steely.

"There are two!" he cried, joyfully.

The other listened impassively.

"They are not submerged and are evidently close together, speaking, but I am a dunce at languages and am unable to get all they are saying," he confessed in a rueful whisper.

"That's alright," snapped the burly man, "I am getting every word. The commanders are planning operations. They are working together—not a bad plan among scattered shipping. Also, it suits us."



THE LIVING SPACE IN A SUBMARINE LOOKING AFT.

breath, and the submarine-destroyer jumped deliriously on the tumbling surface while her commander listened to the ocean traffic. No sound came to them of molested merchantmen. Unseen, they heard the never-ceasing procession of water-born traffic spreading fan-wise from Sydney harbour: tiny, absurd-looking coastal timber-carriers, grimy colliers and great inter-state steamers; drab-coloured transports, ocean going liners, deeply laden, water-swept cargo carriers hammering into the sea, hurrying eastward across the Tasman Sea, and stately wind-jammers straining under tugging canvas. Occasionally the periscope revealed a long, grey destroyer close enough to illustrate the amazing immunity from detection the submersible as a weapon of naval warfare possesses over the on-the-water vessel. Even the lynx-eyed vigilance of the patrolling destroyer failed to detect the periscope lurking in the driving spume.

Then one morning the listening men glanced quickly at each other. The grave

The naval man looked curiously at his companion.

"You propose attacking both 'U' boats?" he asked.

"Yes," replied the blue-eyed man briefly, and hung up the receiver. "They are under weigh," he continued, "and I am going out to locate them and follow them up." He signalled, as he spoke to the steersman.

The destroyer had completed her encircling course. Submerged, she was boring her way through the solid water well below the surface on a carefully planned course.

"There they are—ahead of us," whispered the naval officer at last. There was relief in his voice as the sound of the enemy submarines' propellers crept as a soft tapping from the sound-receivers upon his straining eardrums.

"They are nearer the surface than we are, and with periscopes above water on the lookout for the liner," declared the burly man, reading the indicator. "Now for the

test." He spoke to the engineer at the controls and the forward thrusts increased, compelling the men to lean to meet it.

The enemy Unterwassers' propellers beat louder tattoos on the listeners' ear-drums, and suddenly, ahead and above them two high shapes loomed dimly through the water, in the indistinct opalescent light filtering from the bright sky above. Long, slender, of nothing less than a thousand tons displacement, the flesh-colour of their bottoms gleaming like the sulphur-bellied whales, the "U" boats kept a parallel course a hundred yards apart, each on the alert, not to capture, but to destroy, for submarine warfare is ruthless and to the death. The grave-eyed naval man turned from the observation lenses to his companion.

"I am to be the naval attache observing operations," he said with the suggestion of a question in his voice.

The burly, steely-eyed man nodded curtly. He eyed steadfastly the wolverine shapes ahead and above, with an occasional squint sideways, at the spiral convolutions in the water left by the sneaking terrors, twisting sluggishly and dying under pressure of surrounding water. Again he spoke, and the destroyer described a short semi-circle, increasing her speed as she bore forward and upward. At a signal the helm steadied, and the engineer pulled a lever to the last notch. Upward and forward she hurled at the nearest unsuspecting waterwolf. With set faces and straining sinews the destroyer's crew gripped supports to meet the impact—but, more like a subdued quiver and softened jar than a crash, the steel-wedge stem sliced through the vulnerable bilge of the enemy craft. Half over she rolled with the shock, and the destroyer's screws furiously pulled astern, releasing her bows. Back again the stricken wolf rolled to the pull, straightened, and, filling instantly, slowly began the descent to the ocean floor.

Onward over the sinking "U" boat the destroyer leaped to the attack on his consort. But the large wolf, on the defence, was admirably handled. Suspecting instinctively the nature of the attacker of its sister-craft it rose swiftly to the surface. Missing its antagonist's bottom by inches the A.S.D. 1. drove upward. As the tumbling seas parted over her deck the Unterwasser smartly flung a torpedo after the attacker. The swift and deadly steel fish all but grazed one of the rudders of the rushing

destroyer, and noting the miss, the "U" boat opened shellfire. With the promptness of a sinking stone the destroyer dropped, followed less swiftly by the enemy submarine. Again the A.S.D. 1. charged and missed, forcing the wolf to the surface. The great craft had swung stern to Cape Hawke, which loomed with the ranges behind as a delicate blueish ridge on the horizon, and was tearing at uttermost power of driven engines for safety. She had as much chance of evading the avenger as the right whale has of escaping the "thresher" when first that ocean marauder has tasted blubber. Boring after the flying enemy the destroyer swiftly overtook her prey. Then she dived, and for miles, unseen, kept vigil under the "U" boat's bottom. When the coast-line had sunk beneath the horizon the wolf ventured to slacken speed for reconnaissance, and the destroyer surged to the surface ahead of its victim's course.

"Do you surrender?" the blue-eyed man bellowed at the grim faces in the conning structure of the sea wolf.

"Never!" a man of his own type roared back, and the destroyer's commander flung up his hand in understanding.

Before the "U" boat's second torpedo could traverse half the distance to its target the Australian submarine-destroyer, with speed much greater than its prototype, the "killer" whale of the Australian Pacific coasts, was hurtling toward the enemy. Quickly the "U" boat submerged, yet all too slowly for its swift antagonist. With the might of a thunderbolt the destroyer crashed into the observation structure, wrenching it from the deck, and the great wolf died twelve thousand miles from home.

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War's Aftermath

By CLARA E. JOYCE

Specially written for Sea, Land & Air.

It began away back in the days in 1914 when Ted Treslyn began to do nude pictures of the beautiful, radiant Lottie Moon. We called her the "Moon Maiden," and certainly she was very beautiful with the eerie, unearthly beauty that in its utmost flagrancy is subtle and delicate, and about which there is no grossness at all. She was aware of her own charm, and with gentle benignity strove to let the world see as much of it as possible. Naturally, Bliss Treslyn became jealous, and flatly declined to believe that her husband's interest in the Moon Maiden was altogether artistic and only Platonic. "Platonic affection," said Bliss bitterly, "is only possible between young people who have been married 10 years."

What complicated the position was that in the beginning Bliss had been undecided whether to accept Ted Treslyn's offer of marriage, or go after Reg. Link, and make him marry her. She hovered between the two ideas for quite a long time, and then, suddenly married Ted Treslyn. Had Reg. Link gone after Bliss, he could have had her for his wife, but he lingered overlong, and in those days Reg. was a humble clerk in the office of Starr and Co., Ltd. A quiet youth, with a gift for painting handsome heads, but otherwise devoid of prospects.

Among all the pictures Ted Treslyn showed at the Annual Exhibition, there was only one of Bliss; a scrappy thing in red chalk, while Lottie Moon figured prominently in nearly a dozen and a quarter. And when Bliss saw it her smouldering jealousy blazed to sudden flame, and she told Ted plainly he was her boy, and she would have no Moon Maiden or other apparitions stealing around her property.

Thereafter, for a time, Ted walked circumspectly, and with great caution.

But if Ted did not desire overwhelmingly to paint his wife's head, Reginald Link did; and Reg. was establishing a reputation as a man who did lovely faces. Bliss encouraged the idea, and Ted was delighted with it.

So one day Reg. came to "Asphodel" to paint the head of Bliss. It was a glorious thing, rich, yet delicate, alluring and not wicked. Night after night Ted Treslyn stood

before it and drank in the beauty of it, and looked at his wife with wondering eyes, trying to discover if she realised that the man who had painted it had revealed in it the fact that he loved her. But Bliss gave no sign. She was genuinely proud of it in a pretty, girlish way.

At first it was heads only, and then one day Bliss, draped in a peacock kimona, slipped her pretty shoulder out into the soft light and demanded that Reg. should paint a full length portrait. Reg. painted it, and, after heaven knows what pretty passages, did the Joseph act, leaving his gloves, stick, hat and color box in possession of Bliss.

The British war drum thundered round the world. Ted was a lieutenant in the citizen forces, and he looked wistfully at the beautiful portrait of his wife and sadly turned his steps towards Egypt. Bliss found life lonely, dull, and always with her the shadow of unfulfilled desire. She gave up her flat and went to live with Aunt Jessica; and, as the days went by she found her thoughts dwelling strangely on Reginald Link, whose gloves, hat, stick and color box she still retained. She had heard from various friends that Reginald had changed—been crossed in love, his friends said; and was grown morose, and had developed a habit of clinging to his work as though it were a pet vice.

Then one day she heard that old Anthony Starr's two nephews had gone down in the "Good Hope" with Craddock, off Coronel. Her gossips told her how the old man had reeled under the blow, because they were the last of his race—his dead sister's boys; and how he had taken Reg. Link into partnership, and changed the name of the firm to Link, Starr and Company. Later on she heard how the dear old man had suddenly collapsed and left everything to Reginald Link as all his own kith and kin had gone before him.

The dark days grew darker still. The Australians were at the Straits Impregnable. In France German hordes hunted British armies like wild beasts, and the British armies ran, and slew, and slew, and slew

again as they ran. But all was gloom and horror; and every day came word of some one Bliss had known, or related to someone she knew, was dead or missing.

To occupy her mind Bliss turned frenziedly to war work. But the slaughter went on, and the air was full of farewells to the fallen and anxious sighs for the missing. And one day Bliss returned home worn out, despondent, to find a clergyman awaiting her, with Aunt Jessica weeping softly in the deep easy chair.

The weeks went by and no word of sympathy came from Reginald. Bliss felt hurt. She marvelled that the fact that he had kissed her could have raised such a barrier between them. Men were strange creatures. And one day, moody, depressed, she wrote to him and upbraided him with his callousness; and signed her full name, Bliss Eulalie Treslyn.

A week went by and there came no sign from Reginald, and she had given up all hope of hearing from him, when one morning Aunt Jessica handed her a letter addressed in an unknown hand. She opened it disinterestedly, expecting to find merely the stereotyped invitation to take part in some war work.

But it was a set of verses, and, still uninterested, Bliss commenced to read:—

As scent of roses on a storm,
Or music on a rushing gale,
Is my dear girl of rounded form
And loveliness of lilies pale:
Oh, Eulalie, my Eulalie,
My hungry heart goes out to thee.

My casket of all fond desire,
The starry queen of all my dreams,
Who filled my days with heavenly fire
And lit my nights with passion beams—
Oh, Eulalie, my Eulalie,
Oh, let me whisper love to thee!

The freshness of the seaborne breeze,
The morning fragrance of the flowers,
The melody of choral seas
All mingled in the witching hours—
The wondrous hours I spent with thee,
My Eulalie, my Eulalie.

Although the waves of my desire
Broke on thy cold serenity,
I sensed a glow of passion's fire
In that last kiss I wrung from thee—
Oh, Eulalie, my Eulalie,
Come whisper, dear, thy love to me.

And underneath it two lines:—

"I have been disloyal to my dead friend in my heart, so I go to avenge him. Yours ever, Reg."

Bliss laughed outright, for in her heart she felt a great burst of music. She felt the freshness of the sea-born breeze; the morning fragrance of the flowers, and the melody of ten thousand waves seemed to fill the air. And as she re-read the last verse with its reference to "cold serenity" she laughed again. Aunt Jessica blinked at her with wondering eyes; and then Bliss checked herself and wondered if she was in love with Reginald Link that his missive should have made the world seem so bright.

Bliss's wedding announcement produced a mild sensation, and some criticism. Some went so far as to say it was simply scandalous, but it was argued that the widow of a soldier was justified by the fact that her second soldier husband was leaving almost immediately for the war theatre. And little Bliss or her soldier husband cared for all the remarks their friends might make. She drank her brief cup of happiness and spent every possible hour in the company of the lithe young man with the steady grey eyes, and teased him with occasional glimpses of certain gloves, a hat, and a color box.

When in the fullness of time he went to Mesopotamia as a Flight Commander, she followed his career as far as was humanly possible. Quite a large slice of her income went in newspapers from all over the world which had good correspondents in Mesopotamia; and by this means managed to keep fairly in touch with her husband's life. And no matter how strenuous the times were he always contrived to write her fairly lengthy letters.

Then little Reginald came home with the raven black hair of his mother, and the nut-brown skin of his mother's mother, and a haunting, fleeting resemblance in his eyes to the far-off father in Mesopotamia. But every inch of his sturdy limbs and solid little body were his father's.

Bliss was very happy.

Aunt Jessica's face was grave and her hand shook as she laid the long military envelope on her niece's plate. And the hand of Bliss trembled as she lifted it. Was it a message from the lost? Was it the voice of the dead? It was not:—

"Dearest Bliss,

"I suppose you never expected to hear from me again. Well, you never would but

for Reg. Link. He's a Flight Commander here, and with a squadron of aeroplanes and motor cars he tore two hundred of us out of a prison camp. It was magnificent; and only a hero like old Reg. could have done it. We were at the point of despair when he and his squadron fell out of the sky, bombed the guard, descended and fought a pitched battle with their machine-guns, and got us all away. We were doing forced labor on the railway the Germans and Turks were building to sweep Maude out of Asia. I am off to France now, and, thank heaven, will be able to write to you regularly. I am dying to hear from you, so write immediately you receive this.

Without a word Bliss pushed the letter over to her Aunt, but the old lady shook her head.

"Tell me, my dear. I can guess it—Edwin is alive?"

Bliss nodded. Aunt Jessica started to weep and clutched at the baby frantically. Suddenly her face grew hard, and she stared at Bliss.

"Of course, my dear, the war is not over—neither of them may ever come home. We must just wait and let the King of Heaven decide between them."

"The King of Heaven can do what he likes—I'll never live with Ted Treslyn again."

"He's your legal, lawful husband in the sight of God and man, my dear," said Aunt Jessica.

"Well, I don't care if he is. Reginald Link is the father of my baby, and baby's got some claim to consideration; bless him!"

Whereupon Aunt Jessica nearly smothered that mighty atom in a shower of kisses.

For weeks Bliss sang no more. And then she suddenly recovered her spirits. News came that her Reginald had been wounded and was invalided home. But her tragedy was rushing to its climax, for within 48 hours word came that Ted was also wounded, and would be invalided home.

They were on separate ships, but as near as could be ascertained they would practically arrive together. Aunt Jessica beat the air with helpless hands and prayed continuously. Bliss still sang, but in her heart was a solid lump of something that seemed like lead, and as the day drew near her nerves frayed considerably. Aunt Jessica counselled flight to the country, and there were times when Bliss almost decided to act on the advice.

The terrible morning dawned, and three times she started for the wharf, and three

times she returned to the house unable to steel herself to it. The third time she found a motor car at the gate. Her heart stood still; she looked round wildly for some place of refuge and wished she could drop dead and end it. She dragged her footsteps to the door and it opened as she approached, and in it stood a tall nurse, about whom there seemed something familiar, talking to Aunt Jessica. The old lady pushed her into the little morning room, and closed the door upon her, and Bliss found herself face to face with Ted Treslyn. He took her hands and kissed them, but made no attempt to kiss her face.

"It's all right, Bliss! I know all about it, and I've seen the little boy. He's a bonzer. I have come to give you your freedom and to say good-bye."

"My freedom?" she gasped, catching at a distant hope.

"Yes, Bliss. He needs you more than I. I owe my life to him. You have his son. One kiss, Bliss, and we'll part friends."

"Oh, Ted, I feel horrible! I don't know what to say to you, Ted, dear!"

He smiled.

"Say nothing, Bliss. Get into that car and drive down to meet him."

"Is he—very bad, Ted?"

"He's blind, dear. Go and bring him home!"

Bliss pressed his hands and made for the door, but half-way she turned back and hurried round the side way, taking little Reginald with her. The soldier chauffeur looked at the little boy, bowed, and started the car. As it went out of sight Ted Treslyn limped down the path on the tall nurse's arm, and Aunt Jessica watched them from the door.

"My Godfather, it's the first time I ever knew any good come out of them artist model girls!"

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Wireless on German Aeroplanes

A highly interesting article on communication with aircraft and wireless telegraphy on German aeroplanes appeared in a recent number of our French contemporary, "La Nature." After pointing out the immense importance of aircraft in warfare, the author briefly reviews the methods used by the Germans since the outbreak of war for communicating from their aeroplanes to the earth. One of the first methods adopted by the enemy was to signal by means of various evolutions of the aeroplane, a turn to the right having one meaning, a turn to the left another, a spiral giving a third signification and so on. Obviously this method is crude and when the airman is subjected to gunfire, either from anti-aircraft batteries or other aeroplanes, his evolutions are no longer under perfect control. It was not long before this method was abandoned, its place being taken by smoke and light signals of various colors and forms. In this manner a much more complete code of signals was able to be transmitted and the method had the advantage that the observer could carry out the work independently of the pilot, who, of course, controls the evolutions. Signals of this nature could not be read over a distance exceeding seven or eight kilometres, particularly in dull or misty weather. If the aviator had to signal the results of gunfire over a distance greater than ten kilometres, he was prevented from flying over the target, and had to keep himself between the objective and the battery.

A further method utilised by the Germans while fighting was going on, and a means, we believe, still in use at times, was to enclose messages which were lengthy or needed to be particularly accurate in a small container. This consisted of a metal tube to which were attached streamers for rendering it more visible, together with a small percussion fuse which ignited on striking the ground and created a cloud of smoke. By this cloud a container could be quickly located.

The disadvantages of this method are that the container may be carried by the wind several hundred metres out of its course and may fall in water or on bad ground where it may be lost or only found with difficulty.

Certain German aeroplanes told off for long-distance flights have carrier-pigeons, which are liberated immediately after the object is achieved. At night messages can be transmitted by means of a small search-light which normally serves to facilitate landing. The Morse Code is used for these light signals, which of course have only a short range.

None of the above methods is able to satisfy the present exacting requirements of communication and the use of wireless telegraphy was soon pushed forward. In peace time attempts had been made more or less successfully to communicate from aeroplanes by wireless, but the apparatus had not proved entirely satisfactory. At that time, too, reception of signals on aeroplanes was impossible owing to the noise of the engine, which made the comparatively weak signals inaudible. It was nevertheless necessary to signal to the aeroplane from the ground, and this was done by means of sheets of various colors and forms laid upon the ground in such a way that they could be seen by the aeroplane aloft. Smoke and light signals on the ground were also utilised. For long messages the Germans utilised small projectors, known as the "Mitlehrerschlinwerfer" which enabled them to transmit light signals in Morse. This method of signalling is particularly delicate as it is necessary to keep the projector trained on the aeroplane, whilst the observer, no matter how he may be harassed by the enemy, must keep his eye fixed upon the tiny light.

The author then goes on to describe the actual apparatus used on German aeroplanes at the present time. Three types of transmitter are described, known respectively as the Sender Type C 1916, the "Hüthsender" and the "Telefunken" sender. As a source of power a generator known as the "J. d. Flög, 1917," is used. It is driven by an air screw and is designed in such a way that a constant current of air flows through the windings for cooling purposes. The three types of transmitter mentioned above require different voltages, but this machine is so made that it can be rapidly connected to suit any one of them. The generator not only provides current for the wireless trans-

mitter but also for the searchlights and lamps on the aeroplane. With the screw and connecting wires this generator weighs 10.3kg. The screw is designed to rotate at a speed of 4,500 revolutions per minute in a 150 km. wind. The variations in speed do not sensibly influence the output of the generator. While it might seem that it would be simpler to drive the generator direct from the aeroplane motor, it should be remembered that the air-screw method enables the generator to be driven so long as the aeroplane is in flight, whether the motor is stopped or not, which is, of course, a valuable feature in the event of the engine breaking down.

The Telefunken aeroplane transmitter is contained in a rectangular box measuring 35 cms. by 25 cms. by 15 cms., weighing in all 8.7 kgs. The oscillating circuit consists of a condenser, the usual Telefunken multiple discharger made up of plates separated by mica rings, and the variometer. A three-way switch permits a change of power

by inserting or withdrawing resistance in circuit with the field coils of the generator, at the same time opening or short-circuiting some of the gaps of the discharger. Another three-way switch enables the operator to use three wave-lengths: 150, 200 and 250 metres. The variometer serves to bring the aerial into tune with the closed circuit, resonance being indicated by an aerial ammeter.

The aerial itself consists of copper wire 1 mm. in diameter and approximately 40 metres in length. This wire, which is suspended from the aeroplane, tends to take an almost horizontal position by reason of its inertia and the resistance of the air at the high speed of flight. It terminates in an egg-shaped weight which makes it easier to pay out the wire from the large bobbin on which it is wound. The total weight of the installation, including the generator, aerial bobbin, key and all other fittings, is 25.7 kgs., and the normal range is said to be 35 kilometres.

—"The Wireless World."

Occult Revelations of a Flying Man

(By A PHILOSOPHICAL AVIATOR.)



Man has mastered the question of flying, and close upon that scientific achievement has followed the subject of uncanny experiences that have befallen the aviator. Whilst not prepared to express an opinion regarding the mysterious happenings recorded below, the Editor considers that those of the air will read the article with more than usual interest.



The facts which I am about to reveal will startle not a few readers, and I anticipate a certain amount of scepticism because I have no knowledge of anything more extraordinary having been published before. It has taken me several years to decide to commit these facts to paper for the public's gaze. Indeed it will be readily understood by any sane reader that I should experience quite an amount of hesitation before finally deciding to make known such curious phenomena. I adopt this course chiefly through mere accident.

An acquaintance of mine recently wrote to me for the purpose of asking me a question which ran as follows: "Kindly think over all your experiences of flying, and try to recollect if you have had any uncanny experiences in the air. If so, would they lead you to suspect that there is a personality (a real one) invisible but ruling over the power of the air?" The gentleman who wrote this rightly anticipated that such a question had not been put to me before, but he was quite unaware that I had been perplexed by various unusual experiences which had occurred to me in the lighter element.

To many, happenings of an unusual character in the air are nothing more than instances of the mirage, but to me that explanation is not sufficiently satisfying, and if the reader is patient enough to bear with me till the end of my story, he will see just where the mirage theory fails. My first knowledge of what might, for the want of a better term, be conveniently called "occult aerial phe-

nomena," came from a very experienced pilot who has flown as often as any other man, both during the war and previously. He told me confidentially that at a very great height he had seen a curious colored dragon-like animal apparently floating in the air and approaching him rapidly. The pilot became a little unnerved and at once descended to earth, but for fear of being ridiculed and accused of over-indulgence in alcoholic refreshment he said nothing to anybody till he mentioned the affair to me. Since that day he has been through various similar experiences, and has quite naturally been somewhat perplexed again. The man, let me explain, is a sane, sensible sort of fellow, and believes that other pilots may have had like experiences, but through fear of ridicule they also may feel disinclined to own up.

My own acquaintance with "occult aerial phenomena" has not been quite so appalling or bewildering. They may more easily be explained as simple cases of clairvoyance happening in unusual circumstances. Contrary to general belief a pilot's mind often relaxes in the air, and at great altitudes he feels very lonely, I might say almost distraught. When I was flying a biplane at Y— some time before the war, I was coming in towards an aerodrome when I noticed a mist in front of me. I subsequently learned that the mist was illusory. It opened and I plainly saw an aeroplane, similar to the one I was flying, enveloped in flames, the pilot struggling

(Continued on page 121)

A Fine Vessel—One Bomb and—

"To stand on deck and watch a 'tin fish' come skidding across the water, heading direct for a vital part of your old ship, whilst the periscope of a Hun pirate looms up out of the deep is bad enough, but to be standing on a dock and be aroused from the feeling of safety, the knowledge you are in port brings with it, by a tremendous explosion, followed by the sight of tons upon tons of debris flying in all directions, and the old ship in flames, is worse, and you can accept the word of a man who has experienced both happenings, for the correctness of the statement."

shipowners have catered for the travelling public, but if I mentioned the name—which I don't intend doing—you would instantly agree with me that she indeed held a proud position among the 'floating palaces.' However, we will leave it at that. We had been a long time in commission, and had spent some time in the danger zone, so you will understand to be safely in port was a welcome change which all hands appreciated. The pleasure was further enhanced by the knowledge that some days would elapse before we would put to sea again. It mattered little to any of us that when we left S—



A BRITISH DESTROYER ON PATROL.

These are the words of an officer in the mercantile marine, who was being entertained by some friends at dinner in Sydney recently.

A look of intense interest spread over the faces of those present. They were to hear a true story of one of the thrilling experiences "those who go down to the sea in ships" now pass through. Pressed to continue, the officer showed signs of annoyance. He had been caught "napping." Those of the sea DO things and do not talk, he remembered, and his jaws set with a decisive snap.

The snap of the jaws indicated that he knew he had broken the unwritten law of the sea, and justly merited punishment, and he at once prepared to make the best of the most severe punishment a sailor

we were going direct to the United Kingdom to discharge a big cargo of oils, spirits, etc., and would again have to face the 'tin fish terror.' We had the opportunity to go ashore and that was all we cared about then. The ship was safe—at least we thought so—and if we did meet a pirate after leaving port we had a fighting chance, for we carried a gun, and the men to handle it knew their business. Realising all this we soon had the ship tied up and the 'old man' was not sparing in granting shore leave. Possibly he realised the trying times ahead, and thought he would be a little more generous than usual, so nearly all hands had leave to go ashore, which was most fortunate as things turned out. Naturally no time was lost in getting ashore, but it was just after 3



THROWING OUT A SMOKE SCREEN.

of to-day can undergo—to tell a story of his adventures. "Well," he began, "there is no need to mention the name of the vessel, but you can accept my word that she was as fine a craft as ever carried a passenger. You will think that my having been the chief officer is responsible for such a bold statement, for you all have an idea how lavishly the

o'clock when I left the vessel in company with a friend, and we spent some time examining and admiring the vessels lying in the harbor. There were 160 in port at the time, including naval vessels, small and large, big liners now employed as transports, colliers and the huge number of small craft usually to be seen at S—, and they were all

centres of activity, so we had ample to interest us. K——, who is also in the merchant service, had just commented upon the fine lines of a large passenger carrier known in this part of the world, which was lying in close proximity to the ——, when suddenly a most terrific noise broke the stillness of the air. Instantly I glanced up and my eyes rested on a sight that made me curse the Germans and Germany. Tons upon tons of debris were flying through the air, and there was the ——, my old ship, in one mass of flames. I guessed what had

never thoroughly grasps the full significance of the words until they have an opportunity to witness the work the naval sailor performs in times of danger. How those men worked! They did everything humanly possible to effect rescues, and this over, were ordered to return to their respective ships. Aircraft had been sighted, and those on the battle craft assumed a big craft, which was overhead, had dropped bombs. Quickly the anti-aircraft guns were manned and elevated, and a smoke screen thrown out, a dense mass of thick black smoke enveloped every-



THE SMOKE SCREEN NEARLY COMPLETED.

happened, and subsequent events proved the guess to be correct. Some inhumane brute had put a bomb among the cargo. However, K—— and I at once set off to the scene to render whatever assistance we could, but, although we had only a distance of 200 yards to cover, the navy had to work first. Lifeboats from the British, French and Japanese vessels were alongside the burning steamer in less

thing. This was, indeed, a wonderful sight, but fortunately before a shot was fired it was discovered that the hydroplane was a Britisher, which had been on patrol work. The aviator quickly considered it prudent to quit the danger zone, and 'landed' in the harbor. The ascent and descent of these birds of the air is an interesting sight under ordinary conditions, but at that moment we were not inclined to be en-



COMPLETED. IT WILL BE NOTICED THAT NOT A MOVEMENT OF THE VESSEL IS NOW PERCEPTIBLE.

time that it takes to tell of their smartness, and though there was great danger in consequence of burning oil, and the possibility of a second explosion, leaving aside the chance of the vessel bursting, the man-o'-war-men knew no fear. The vessel was burning fiercely, and carried a big supply of ammunition for the twelve-pounder gun, and though they knew the ammunition must explode when the flames came into contact with it, they worked on. Others were in peril, and if there was a chance to rescue them that chance must be taken. That 'way they have in the navy' has been often talked about, but a person

thusiastic. The air episode ended, it was decided to move the naval vessels away from the burning oil, which had begun to spread over the harbor immediately after the explosion. The ships were eventually moved to a place of safety, and then the men were put to work to assist in constructing a boom of pipes on rafts, around the burning vessel in order to keep more burning oil from spreading. This proved a difficult task, but like everything else the navy does, it was carried out successfully.

"At last I had an opportunity to make some sort of an examination of the vessel. She was one mass

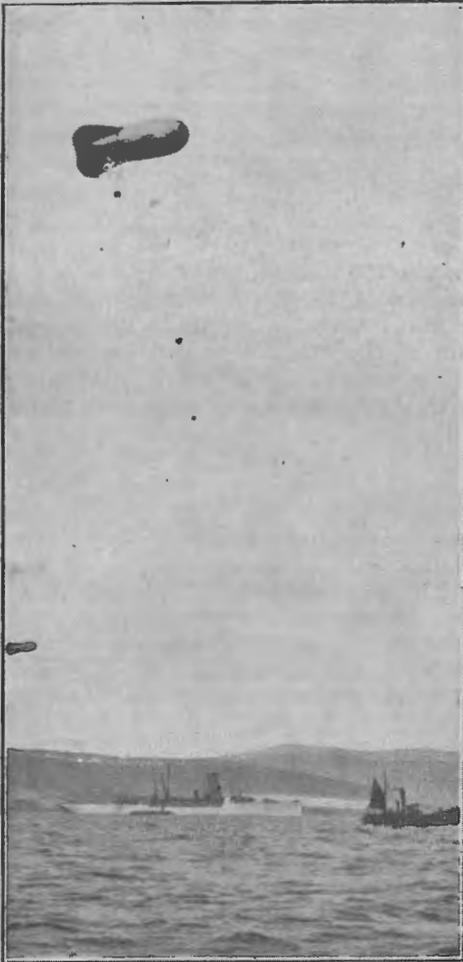
of flames from the funnel forward. Dense columns of black oily smoke were occasionally ejected from the fiery furnace and this was gradually settling cloud-like over the city. The decks had become bent and buckled; in fact, the plates were, in places, red hot. The foremast had fallen, but the funnel and mainmast stood intact, and, strange to say, the vessel had but a slight list.

"Those who were able to, remained standing by

number of people injured by the shrapnel. We who were close at hand at once saw the end had arrived. The whole of the vessel's stern had been blown out, her funnel and mainmast had fallen, and all the upper works had collapsed. She was a mere hell, and it was only a matter of hours before she would sink. Of course the fire continued to burn on, but the end was gradually approaching. The vessel began to settle down, deeper and deeper until eventually the keel rested on an even bottom. Even then the fire had not been extinguished, smoke and flames being visible for some hours after, but about 80 hours after the trouble began all that remained of the once fine steamer was a charred mass of shell, iron and debris.

THE FATALITIES.

"Oh, our fatalities. I had forgotten. Well, I have told you most of the men had shore leave, and it was just as well, too, as events proved, for, instead of ten killed and several injured, it would probably have been fifty or sixty killed, for we carried a big crew. One unfortunate seaman who was in the fore-castle when the explosion occurred tried to get away through a porthole, but he was jammed. He could neither go forward or extricate himself, so he was eventually burned to death in that helpless position. Poor chap, he was a dreadful sight when he disappeared with the vessel. The memory of the charred mass, that had once been a human being, remains vividly with me night and day. It cannot be suppressed, but it is a picture I will have in my brain more vividly when I meet a German or German sympathiser."



THE EYES OF THE NAVY.

at a safe distance. They could do nothing else. The vessel was doomed, and it was impossible, in the face of the increasing danger, for the flames were now approaching the ammunition, and it was a case of awaiting the end. About four hours after the first, the second explosion occurred. This was at first assumed to be the ammunition, but the surmise proved incorrect, for that explosion did not occur until after 11 p.m. When it happened, it was preceded by a blinding flash, then a deafening roar. We had all imagined what it would be like, but the most descriptive language cannot adequately describe it. Debris, all shapes and sizes, was thrown from 300 to 400 feet in the air—one piece of iron weighing 130lbs., was thrown into the city, where dozens of windows had been broken as well as a

Occult Revelations of a Flying Man

(Continued from page 118)

to get away from the temporary furnace. For some time I wondered whether the vision was a warning to me or whether it applied to anybody else. Three days later a fellow-aviator was burned to death through his machine falling and catching fire. The machine was identical in type with the one I was flying and with that which I saw in the "aerial vision." That instance is but one among others.

The former case, of course, presents the most difficulty. To return to my acquaintance who first queried me on so-called uncanny happenings in the air, it is his theory (though I do not accept it personally, and am indeed thoroughly opposed to it) that there is a personal devil residing in the lighter element, and that accordingly man was not intended to explore these regions. He advances various scriptural quotations to support his contention. Quotations, however, from any sacred writing can prove or disprove anything if the context be ignored. I cannot offer any explanation myself, but I should welcome any theory from those competent to form an opinion. If different aviators could be induced to reveal themselves and relate their individual experiences, such further evidence would prove valuable. It will be readily understood that for the present I must remain anonymous for reasons which must be sufficiently obvious to readers who realise that too much publicity is liable to vulgarise those who present new experiences to a sceptical world. I should resent most strongly any effort of the daily press to make me and my revelations the nucleus of a newspaper "stunt"—that daily food of the less influential periodicals.

("The Occult Review.")

Thoughts on a Peace for the World

(By R. G. Gordon)

Terms of peace must eventually be arranged, and we all hope on terms laid down by the Allies, and not those of the enemy. We are also united in the hope that when peace is arranged it will be a lasting peace, and the horrors of war will be done away with forever. Can such a peace be arranged, one asks? Many agree that it can, but the majority think otherwise. Those who consider a lasting peace can be maintained are prepared to advance ideas and schemes as to how it can be arranged, and not the least remarkable of these that have come under our notice is that suggested by Mr. R. G. Gordon. Demands on space prohibit our publishing the whole of his scheme in the one issue, but readers will be able to gather the purport from the section which appears. In next issue we shall set out the difficulties that stand in the way, as the author of the remarkable essay himself sees them.

Introduction.

The catastrophe the world is now passing through with all its attendant horrors, must set many minds thinking how the problem of preventing war may be solved, and as it is a subject of the very first importance to mankind, does it not deserve the organisation of the minds of the nations for the purpose of developing a scheme that will ensure a peace lasting for all time?

Is the time not opportune for us to organise, to gather together the thoughts that are generally being given to this great subject, so that they may be sifted for any germ they may contain that will assist us to reach the desired goal?

No excuse is needed for any individual placing before his fellow men his thoughts upon such a subject, whether he can attain to a literary standard or not; too much cannot be written or said upon such a subject for, although much may be written or said, and be of no practical value, the exchange of ideas may be the means of evolving a scheme whereby a peace for the world may be a materialised fact, and the author, in setting out his ideas, desires to encourage a movement for the search for a practical scheme that can for all time be maintained.

The author is so presumptuous as to suggest a scheme for such a purpose and invites criticism, for, although his ideas may be Utopian and impracticable, they may contain a small germ that by criticism can be developed into life. If so, his purpose will be achieved.

International Law and Treaties.

The present war has made it apparent to the world that International law and treaties are futile, and the whole fabric built up by

rations for the safeguarding of their interests and protection against attacks and inhumanities of other nations and regulation of the conduct of war has collapsed, and the confidence in any international law or treaty has been so shaken that no nation will rely upon anything but force for securing even existence.

Law and treaties must be backed up by force, and if in the future that force is to be possessed individually by each nation, we shall still be living on the edge of volcanoes and increasingly greater defensive and offensive power must be developed by the nations to secure their separate existence, and a large proportion of their energy must be utilised to create and maintain that power.

And now that the value of international law and treaties has proved to be of no avail and not worth the paper they are written upon in the case of an aggressive and ambitious nation, the smaller nations must depend upon alliances with the stronger nations for their existence, and this, no doubt, will tend to group the nations of Europe into two great and powerful alliances each arming to the hilt for fear of attack by the other, and probably waiting a chance to crush each other so as to be relieved of the awful strain necessary for maintaining their military and naval forces.

If the Central Powers are arrayed on one side, could the other alliance rest contented with treaties or put faith in international law? I think not, but we shall still have to live in peace preparing for war.

Although in this war we may beat the Central Powers to their knees, can we keep them on their knees? No. Before long they will get on their feet again, and unless this war changes the nature of the van-

quished, they will long for and prepare for revenge.

Is it possible then with each nation holding within itself its military and naval power to prevent a recurrence of this awful world tragedy? It may not recur within this century, but national hatred has lived through centuries before and is it not likely to do so again? Should the Central Powers be crushed for the time being, no doubt their hatred will live with an intensity such as national hatred has never reached before, unless some scheme is devised to prevent war, and to allay such a feeling of national hatred.

Think what an Elysium we should have been living in if there had been no fear of war, and if the brains and energy that have been devoted to the manufacture of weapons of destruction had been exerted to the purpose of improving the condition of the human race.

It is almost unthinkable that man, with all his knowledge, has not yet found some means of existing without continually raking his brains for means to destroy his fellow man, and what for? Greed, power, pride and ambition. To satisfy these a small body of men have cast the world into a hell. Let us think how we can convert it into a paradise. God has made it so, but paradoxically has placed in it human beings who convert it into a hell again and again.

Still, out of the bitter may come the sweet. Let us hope that from the chaos of the present war Phoenix like a lasting peace for the world will arise and allow man to enjoy the gifts that nature has placed within his reach.

How?

That is the question awaiting an answer, but many a difficult question has been overcome by the collective exertion of brains. It is not many years ago that flying or travelling under water was considered impossible, yet brains have solved the problems. Then why not the problem of how to prevent war? Let us hope that through this war a scheme will be devised that will bring to the world a lasting peace, so think one and think all and let the whole nations think, collect their thoughts and then think again and again.

Why have many difficulties been overcome? Why flying and travelling under water? Ambition and the desire for wealth!

Let the prize awarded for the solution of this, the first and most important benefit a man can have be the greatest honor and

the greatest prize that man ever strove for, and then the best brains and the cleverest of all nations will be concentrated upon the problem.

Why have many of the best brains been devoted to the invention of instruments of destruction? Because it offered a field of enterprise richly rewarded. Culture (spelled with a C or K), was this your duty to man? We know that nature plays a game of building up and breaking down, but she has endowed man with a sense that tells him there is no just reason why he should build up a civilisation to destroy it again by a devastating war.

We might understand that it was necessary if man had to struggle for a bare existence, but if destructive energy was directed to productive and industrial purposes for his benefit, the world has room for thousands of millions more men.

International Power.

In the absence of some such practical scheme, it is evident that every nation must be in itself an armed force, without which international law is not worth the paper it is written upon.

It is only by force that any law can be enforced. Within a nation the laws must have force behind them or they become inoperative, but that force is a unit under one control.

With international law it is different. The force that is to make the international law effective is held individually among those to whom the law is to be applied, and instead of being a unit it is a collection of units under a collection of controls. It is the same as though the individual citizens of a nation were each given a gun to enforce the law in such manner as each thought fit. Unless there is a preponderance of power among these units combined to respect and enforce the law, the international law is of no value, and should any combination of nations consider that they have sufficient force behind them as in the case of this war, they may utterly disregard the international law they helped to frame.

If the force required to maintain international law and establish a lasting peace could be concentrated into one unit under a joint international control instead of being composed of a number of units held severally by the nations any one of which may or may not be an international law breaker as circumstances arise, then we should be nearing a solution of the problem of a lasting peace.

For the national units of force to be concentrated into one unit would mean disarmament of the nations. This is the impossibility we have to overcome. No doubt the problem is a hard one to solve and will need many brains much more capable than mine; nevertheless, as I consider no excuse is wanted, I have the vast presumption to outline a scheme for that purpose, not with the expectation of such a scheme being a practical means of bringing about a world's lasting peace, but for the purpose of encouraging thought upon this great subject and perhaps be a peg from which a start may be made.

Many Statesmen of high standing have considered the disarmament of nations an impossibility, but we should not despair because we have not yet found a way to that desired goal. This war should add zest to our endeavors. There is no doubt that the concrete production of many minds will before long solve the problem, but the production of those minds must be collected and the serviceable threads produced woven into a practical scheme.

The German peace proposals we occasionally hear of show signs of the fear of failure, and if they go down and the hand of vengeance is laid on too heavily by the victors, the difficulty of establishing a lasting peace will be greatly increased, and its consummation probably delayed many a decade.

Much as those who have been the cause of this great war and all its attendant horrors deserve the severest punishments, yet, if by tempering justice with mercy, a lasting peace could be more speedily obtained, would this course not pay the world better than justice with all its severity?

Britain has found the policy of conciliating her enemies after conquering them the best method of securing the peaceful settlement of the captured countries, and if a lasting peace is to be brought about, it must also be by conciliation and not by vengeance.

Reader, can you imagine the benefit the world would have derived if the energy and brains that have been diverted to purposes of manufacturing instruments of destruction, depleting the industrial ranks of its best manhood, had been otherwise utilised? If these men had been employed producing national wealth, can you conceive such a thing as poverty? Instead of looking forward to a hard and pitiless future, the future would have promised nothing but sunshine.

Let us then join forces, organise and form

the greatest army the world has ever known, an army of all-nations working together on humanitarian lines instead of outdoing the savage in barbarity, for the purpose of framing international laws that will secure to mankind for all time a peace with a banner of goodwill to all mankind.

Now for my vast presumption. Criticism is invited to tear my ideas to pieces, and should such criticism but start one beat of the drum that may yet call this army together, the author will be more than satisfied.

Combined Forces.

To expect the nations of the world to disarm is certainly expecting much, and whatever scheme is adopted, it will have to guarantee the safety of every nation—a big job. Yes, it is a big job, but should we shirk it because of its magnitude? The greater the difficulty the more honor and satisfaction in achieving our object.

As before stated, the probable solution of a lasting peace may be the concentration of the present national units of force into one consolidated unit. No doubt it is the only solution, and it is upon such lines I venture to make suggestions.

This concentration can only be done by the individual nations mutually agreeing to disarm under a scheme that would assure their safety from attack, and from this point any scheme for a lasting peace must be built up.

The love of conquest and the ambition to extend its dominions have been the policies of most nations, or, at least of their leaders or rulers. Policies that have drenched the world with the blood of its best manhood. No doubt this love of conquest and ambition would, with some nations, weigh heavily in the consideration of any scheme for a lasting peace, as it goes without saying that with the establishment of a lasting peace, the map once plotted would practically be plotted for all time as the only chance of extending boundaries would be by purchase or treaty.

Any nation that would not join in a scheme for a lasting peace whereby its safety was assured because of a desire to extend its territory at the expense of its neighbor, would brand itself a nation of robbers and murderers, and such a nation should be shunned by all other nations and commercially ostracised.

Modus Operandi.

We will first assume that the nations have been approached and that a sufficient

number has agreed to disarm and form a concentrated unit of force provided that a scheme could be formulated that would be acceptable and ensure their individual safety.

Then these nations should form an International Peace Congress with representatives from all of them empowered to offer large premiums for the best schemes that could be submitted, the premiums being of such a character that they would induce the best brains the world possesses to put forward their energies for this purpose. From these schemes the Congress would endeavor to formulate a scheme to place before the nations, and if it was favorably received, probably after much amendment by the nations, they should be asked to submit it to the voice of their peoples, who should decide as to its acceptance, for, with the weight of the peoples at the back of any scheme, it is more likely to succeed.

The confidence of the nations is now so shaken in treaties, great thought would have to be given to any scheme to safeguard it at its inception so that it could not be abused, and with a large majority of the people of each individual nation at the back of any scheme it would be made more secure against violation in its inauguration.

Should this Congress fail to formulate an acceptable scheme, then it should be dissolved and another one appointed until an acceptable scheme is produced to put before the people by each nation. Our motto should be, "Try, try, and try again."

Pooling the Armaments.

Assuming that sufficient of the nations have agreed to disarmament, then I would suggest these nations form an International Peace Parliament composed of representatives of all consenting nations, and the Parliament should be of a migratory nature holding a session in each country in succession, and should deal with all matters connected with the peace of the world, and not with any fiscal or commercial matters.

The Parliament's first duty should be to formulate a method of carrying out the disarmament so that no nation be left in a position capable of attacking any other nation, and the Parliament should be assisted by both military and naval experts.

The next duty would be to consolidate out of these disarmaments a great international power. In doing this they would have great difficulties to overcome, the first would be the location of this power; the second, its control; the third, how to keep the power

beyond the reach of any one of the nations or combinations that might use it to obtain a mastery of the world, and the fourth difficulty would be how to prevent it from within itself taking on the domination of the world by its own power.

Location.

At the first glance it is apparent that this Power should not be located in any of the nation's territories, and to be consolidated it could not be distributed among them, for it would be accessible to influence and corruption or be liable to be annexed by the nation in whose territory it was situated, hence it must be an isolated power. This can only be done by making it insular, and as it is proposed to be insular, it must be largely naval in character.

The purely naval power is proposed to be established on two islands, situated a considerable distance apart, and these must be neutral or international territory. The naval power on each island should be of equal strength.

These islands should be used as naval stations only and for no other purpose, and upon the islands there should only be a limited quantity of ammunition, and although factories for the manufacture of munitions might be installed, only a limited supply of materials for the manufacture of munitions should be allowed.

All military equipment "pooled" should be established upon two other islands in equal units also situated a considerable distance apart, and also a distance from either naval station, and on each island factories should be established for the manufacture of guns and munitions, but only to be kept in readiness for any necessity.

No large supplies of materials should be kept on the islands, but supplies should be transported to them as required.

No civilian population should be allowed on the island, and only limited amounts of food supplies should be provided, but supplies should be transported as required.

The naval stations should be garrisoned with sufficient men to fully equip the whole of the vessels, and the garrisons should consist of men picked from the federated nations, and would be controlled by a naval board on each island, also constituted of representatives of each nation.

The islands on which the military units were established should be protected by forts, and the garrisons only sufficient to man the forts, and the garrisons would be

likewise chosen from the whole of the federated nations and also controlled by boards internationally constituted.

National Supervision.

It is proposed that there should be an international police consisting of men drawn from the whole of the federated nations, whose duties would be to patrol the various countries for the purpose of reporting any breach of the international laws, especially the one that would be framed to prevent the manufacture of any weapons of war. It is proposed that the police should be formed into companies, and a company would patrol a country for a short period only, then exchange with another company, so that no company would be permanently located in any country.

Courts.

It is proposed that an International Arbitration Court should be established to deal with all matters in connection with the Peace Federation, and this court would be also constituted of representatives of all the federated nations. From decisions of this court there should be the right of appeal to a second internationally constituted court, and if this court confirmed the decisions of the arbitration court, the decisions should be final, but in the event of a difference of opinion between these two courts, the matter in dispute be argued by the members of these two courts, before a third and final court, whose decision would be final.

(To be Concluded in the Next Issue.)

"Cavalry of the Clouds."

Paying tribute to the Air Services in the House of Lords, Earl Curzon quoted some illuminating figures, showing the great increase in the number of men and machines. Earl Curzon said: "I now come to the Air Service. When we are dealing with the Royal Flying Corps or either of the services, I deliberately say that nowhere in this country has the spirit of knight errantry been more conspicuously shown. When in August, 1914, 100 officers and 66 machines made their way to France, who could have foreseen that they would have developed into a great fleet of thousands of machines and tens of thousands of men. On the western front in the first nine months of 1917 the men of the Royal Flying Corps brought down 876 enemy machines, they drove 759 out of action, 52 were brought down by anti-aircraft gunners; thousands of tons of explosive were dropped on aerodromes, bridges, railways, lines of communication, and even on marching regiments. Apart from offensive operations and activities of the Air Service, they are the eyes of the Army in the field. Then we must not forget the airmen at home, who have shattered the enemy's Zeppelins, and by their skill and bravery on many occasions have brought those great gasbags in flames to the ground. I sometimes think when Gothas are shrieking over London, and when the civil population are cowering in their cellars, we might give a thought to those brave men who are riding in the darkness above and risking their lives to save us from destruction. (Hear, hear:) I include in the same tribute the officers and men of the Naval Air Service. There is no distinction between the two Services. At the beginning of the war the personnel of the Naval Air Service was 800, and now it is 42,000. Its fleet in August, 1914, consisted of seven airships, 30 aeroplanes, and 34 seaplanes, whilst the number is now many thou-

sands. The most effective branch of the Service has been the Naval squadron of Dunkirk, from whence it has bombed aerodromes and has diminished and at times stopped the aerial invasion of our country. These airmen have been in evidence in every theatre. They have flown over Damascus, dropped bombs on Beyroul, destroyed buildings in Constantinople, and their flight to the Lake of Constance in the early part of the war and destruction of sheds there will be remembered."

At the same time in the House of Commons, the Prime Minister with more picturesque language paid the following tribute:—

"I may be permitted to mention one arm of the Service which has appeared for the first time in this great war—I mean the Air Service. I am sure the House would like special mention to be made of our Air Service. The heavens are their battlefield; they are the cavalry of the clouds. High above the squalor and the mud, so high in the firmament that they are not visible from earth, they fight out the eternal issues of right and wrong. They are struggling there by day, yea, and by night, in that titanic conflict between the great forces of light and of darkness. They fight the foe high up and they fight him low down; they skim like armed swallows along the front, taking men, in their flights, armed with rifle and with machine gun. They scatter infantry on the march; they destroy convoys; they scatter dismay. Every flight is a romance; every record is an epic. They are the knighthood of this war, without fear and without reproach. They recall the old legends of chivalry, not merely by daring individually, but by the mobility of their spirit, and, amongst the multitudes of heroes, let us think of the chivalry of the air."

Flying Elections.

An Amusing Travesty on English
By-Elections at the Present Time.

South Woppington was plunged in grief—at least the newspapers said so. The Right Hon. Ernest Eggleton Hetherby, who had represented the constituency in Parliament for fifteen years, had died of senile decay and the "South Woppington News" considered that it would be very difficult to fill his place. This view was apparently not shared by at least three gentlemen, who had already come forward as prospective candidates. They were:—

Sir Willington Wanningham (Government).

Mr. Stuart Blythe, K.C. (Independent).

Mr. Arrowby I. Ayres (Watchdog).

It was rumoured in the "Spotted Dog" that a fourth candidate, a local man, was likely to enter the lists, and offer himself to the electors simply and solely as a Reprisalist. But it was felt that the fact of his being a local man would severely handicap him. No man is a prophet in his own country, so Sir Willington Wanningham had come from his palatial mansion in Cumberland, Mr. Stuart Blythe from a garden city, and Mr. Arrowby I. Ayres from no one knew where. The all-important point was that none of them had ever been in South Woppington before, and had no conceivable interest in the place. It was really difficult to tell which candidate the "South Woppington News" favored. It reproduced a photograph of Sir Willington playing ball with his little niece, and in the same issue gave the year in which Mr. Stuart Blythe took silk, and hinted that he might eventually sit on the Woolsack. In that issue Mr. Arrowby I. Ayres appeared to be amongst the "also ran." Knowing well the refined tone of the "South Woppington News," I suspected that he was in some way declassé, and I decided not to vote for him. But I was speedily disillusioned. The very next day the "News" gave a two column interview with Mr. Arrowby I. Ayres, and headed it "The Man Who Wants To Get Things Done." I decided to vote for him.

This was my frame of mind on going to bed. On rising next morning, I was more determined than ever to vote for him. The censor, I am afraid, will not allow me to tell you exactly what it was that confirmed my decision. Suffice it to

say that there was an air raid that night, and that we in South Woppington were not altogether unaware of the fact.

As I shaved that morning I cut myself twice through itching to get things done, and badly jammed the inside of my cheek with the tooth-brush through the vehemence of my determination to insist on air reprisals. Long before I had finished dressing I had come to the conclusion that both the white-livered baronet and the glib-tongued barrister ought to be hounded out of the constituency, and I was determined to do some of the hounding.

At mid-day I bought a halfpenny paper, and found that Woppington loomed large in the news. I turned eagerly to the column headed "Woppington Candidate says Wop German Towns." Ah, I thought, good old Arrowby I. Ayres! But it wasn't. I could hardly believe my eyes—it was Sir Willington Wanningham who had uttered those memorable words. He had said a great many other things which seemed to me truly admirable, such as: "The electors of Woppington in giving me their votes will let these bandits of the air, these moon-lighters, these raiders of the night, know that they will be repaid in kind. I demand a hecatomb in every German town." After all, I reflected, blue blood tells, and evidently Sir Willington was the man for Woppington. His language seemed to me to express admirably my own sentiments. A man of social standing who would talk like that in Parliament would be a real asset to the nation. I decided to vote for him.

But on the fourth page of my halfpenny paper, in a special article on the urgent need of reprisals, Mr. Stuart Blythe, K.C., was quoted as saying that it was simply to secure a policy of reprisals that, at a crisis like the present, he ventured to oppose the Government nominee. The Government had done nothing but temporise. "Was it likely," he asked, "that any nominee of the Government would be a strong man? Was such a creature likely to harass the Government till we got reprisals?" Now, I am not easily swayed in my opinions, but I must own that these arguments shook my faith in Sir Willington. Everything considered, I decided to support Mr.

Blythe. He was not a party man, his hands were free, and his legal training would enable him to present the case for reprisals to advantage.

A few days later South Woppington was thrilled to its core. Every paper in England rang with the news. Mr. Arrowby I. Ayres had challenged Sir Willington Wanningham to a twenty round contest to be held at the Palaceum Music Hall, the proceeds to go to a war charity. It happened thus. Sir Willington was addressing an open-air audience from his twin six car, and in the midst of an impassioned period exclaimed, "I am thoroughly conversant with every phase of flying——" Here he paused, either for effect or for want of breath, whereupon a rude raucous voice said "'E means lying." Ribald laughter followed this sally, and Sir Willington roared at the top of his voice, "If the cur who made that observation will step forward I will thrash him like a dog." Nobody stepped forward, though I very nearly got pushed forward. Finally the meeting broke up in disorder.

Next day the report got out that it was Mr. Arrowby I. Ayres who had made the insulting remark. He, however, wrote to the "South Woppington News" to say that he had not done so, but that it was a pretty witticism nevertheless, and that if Sir Willington would say the things he did say, he ought not to be surprised if the men of Woppington told him what they really thought about him. Sir Willington wrote and said that Mr. Arrowby I. Ayres was no gentleman and was simply pandering to the rabble. Mr. Stuart Blythe now took a hand, and in a carefully-worded letter pointed out that there is no rabble in South Woppington, and that Sir Willington had no right to come from Cumberland to insult the free-born electors of Woppington; nevertheless, he considered Mr. Arrowby I. Ayres' letter in the worst possible taste—it was altogether unpardonable gratuitously to cast aspersions on the veracity of a fellow candidate. Mr. Arrowby I. Ayres then challenged Sir Willington to fight the matter out in true British style; as for Mr. Stuart Blythe, he said, that person was he believed, a lawyer—and South Woppington knew what lawyers were. This induced Mr. Stuart Blythe to threaten Mr. Arrowby I. Ayres with a libel action, whereupon the latter apologised, and said that though lawyers were passable enough

in their proper place, that place was certainly not the House of Commons, where their ineptitude was conspicuous from the Treasury Bench to the Kitchen Committee, and he offered to box, run, row, or swim Mr. Stuart Blythe for £100 a side. At this stage, it must be admitted, popular sentiment was strongly in favour of Mr. Arrowby I. Ayres, who was spoken of even by his opponents as a "good old sport."

The "South Woppington News," in a chaste leader, appealed to all three candidates to drop personalities and confine themselves to the mighty issues at stake. Many letters appeared from electors, and many more were unavoidably held over on account of want of space. Two of mine were held over—one, quite a short one, urging the advisability of a more suitable venue for the proposed twenty-round contest than the Palaceum, and the other simply asking if it were true that Mr. Stuart Blythe had insured his voice for £1000, as I had been informed on eminently credible authority.

Oratory has always had charms for me, and I found myself swayed in turn by the eloquence of all three candidates, who seemed to me to represent three distinct schools of oratory. Demosthenes, I believe, used to orate with pebbles in his mouth; Sir Willington sounded as though he followed this tradition. Mr. Stuart Blythe reproduced the cultured charm of Cicero with a dash of Daniel O'Connell in it, whilst Mr. Arrowby I. Ayres reminded one irresistibly of Robespierre haranguing the Commune, in the attitude of Ajax defying the lightning.

Mr. Arrowby I. Ayres naturally made great capital out of the fact that he had four times been up in an aeroplane, and actually looped the loop. Sir Willington reminded the electors that three of his ancestors had distinguished themselves in the House of Lords. This left Mr. Stuart Blythe in, and in a very telling passage, he exclaimed: "It is obvious that the proper place for such a distinguished flying man as Mr. Arrowby I. Ayres is in the air, driving away Gothas; it is equally obvious that Sir Willington ought to go to the House of Lords, and keep up the family traditions; my place is in the House of Commons."

Sir Willington seemed to know a great deal about flying—I mean a great deal for a man who came from such a very old

family. He was constantly telling us things like this: "The power exerted by a pigeon flying is 2222 feet per minute, which works out at approximately 50 horse-power per ton weight." This, he said, would give us some idea of the horse-power necessary to clear the air, and it was this statement, I imagine, that drew from Mr. Arrowby I. Ayres a decidedly vulgar remark about ass-power, which vulgar remark decided me not to vote for Mr. Ayres. To help us to realise the difficulty of aerial defence, Sir Willington explained that if you allowed only two pigeons to a square yard (surely, he said, a modest demand), a very ordinary-sized flock of pigeons, looking little larger than a Gotha, would contain 117,183,000 pigeons, and yet this target would give a sportsman no chance whatever. It was stupid, therefore, he said, to say, like Mr. Arrowby I. Ayres, that Gothas ought to be brought down like pheasants, driven to the guns. Mr. Stuart Blythe stole Sir Willington's pigeons, so to speak, to illustrate the food problem. It was, he said, a well-known fact that a pigeon eats half a pint of grain a day, and that consequently Sir Willington's flock of pigeons would require some 9,800,000 bushels of grain a day. That perhaps would give them some idea of the magnitude of the problem that men like Sir Willington left untouched.

Mr. Arrowby I. Ayres said that, personally, he would be very pleased to talk about pigeons when the war was over, but at present—no, emphatically no! For his part, he would never sleep peacefully in his bed till he heard Gothas tumbling from the skies like a shower of meteors. He had, he said, challenged both his opponents to fight him—and they had refused. Were these craven-souled wretches the kind of men to represent South Woppington? A thousand times, no! He, Mr. Arrowby I. Ayres, had entered into a £2000 bond not to accept the Premiership, nor the Chancellorship of the Exchequer, as long as the war lasted. Why did his opponents not do the same? He was, he said, going to Parliament, not to smoke cigars in the lounge of the best club in the world, not to seek office and bolster up his family traditions, not with an eye on the Woolsack, but merely to become the scourge of imbecility, inactivity, inertia, and inanity, and to voice the claims of the toiling masses, if need be, in tones of brass. This speech of his on the eve of the poll gave me furiously to think—there was a good deal in what he said.

It was a very small poll, the smallest on record, and the figures were declared as follows:—

Sir Willington	Wanningham	
(Government)	2381
Mr. Stuart Blythe, K.C.	(Independent)
		503
Mr. Arrowby I. Ayres	(Watch-dog)
		84

Mr. Arrowby I. Ayres accounted for his defeat by the fact that a false alarm of an air raid was sent out (possibly by his opponents, he thought) on the day of the poll, and this undoubtedly kept many of his most ardent supporters at home. But surely the false alarm worked trilaterally. I myself, for instance, would, in all probability, have voted for Sir Willington, had I considered it safe to go to the polling-booth.

—D.D.D.D. in "Flight."

"The Night Fliers."

(After "Asleep in the Deep.")



Stormy the night, and a lowering sky.
 Proudly the 'plane doth ride;
 Hark how the passenger's startled cry
 Rings as he clutches the side!
 There on the deck, see, the pilot stands
 Doing the duty his country demands:
 Though death be near
 He knows no fear
 While at his side is the latest type gear!

Brightly the flares from the landing-ground blaze,
 Bidding us list to the hint it conveys:
 Pilot, take care! Pilot, take care!
 Hundreds have crashed, so beware! beware!
 Many brave hearts have neglected their charts,
 So beware! beware!

What of the tempest the following morn?
 There is no trace or sign!
 Save where the wreckage bestrews the corn,
 Peaceful the sun doth shine!
 But ere the wild raging storm did stop,
 Two gallant airmen were caught on the hop—
 No more to roam
 Afar from home,
 No more forced landings because of the Grome!

Brightly the flares from the landing-ground blaze,
 Bidding us list to the hint it conveys:
 Pilot, take care! Pilot, take care!
 Lewis guns jamb, so beware! beware!
 Many brave hearts have been mixed with spare parts,
 So beware! beware!

Punctured

The Story of an Unlucky Voyage.

(Related by an Officer for Sea, Land and Air.)

"At six o'clock on Sunday evening, we were punctured." Those are the words in which the narrator of this story told us that his ship, a fine vessel, well-known in the Australian trade, was torpedoed. For the rest, the story is sufficiently exciting to tell in his own words.

"A few days after leaving Capetown, the second officer died of appendicitis. We only had one other officer, who was just about as useful as a sick headache, so the skipper and I were compelled to take watch and watch, that is, four hours on and four hours off, continuously. Fortunately the weather was good, but in all other respects we had a very poor time.

"Things went quietly until the fateful Sunday. We were steaming along in company with another merchantman, line ahead and zig-zagging in order to dazzle the tin fish.

Torpedoed.

"The skipper relieved me for dinner at three bells. No time or ceremony were wasted over meals in that locality, so within half an hour I had finished my meal and returned to my cabin for a few minutes' smoke. I had just lighted my pipe and uttered a grunt of satisfaction, when I heard the 'old man'* shout, 'Submarine on the starboard beam—a torpedo!!'

"Just as I stepped out of my cabin I met the third officer and purser coming from dinner. We could do nothing for the moment but stand and watch the approaching torpedo. The ship was swinging away to port and the torpedo was coming from abaft the beam, so that it would either strike or miss the ship forward. I offered to back 10 to 1 either way, but there were no takers. The next minute she struck some distance forward of the bridge.

"The explosion was terrific, the poor old ship reeled and almost shook to pieces, and a vast column of water was thrown up higher than the masts, drenching the vessel from stem to stern as it fell.

Lifeboats Away.

"My first duty was to see to my lifeboat and get it lowered. I found my boat's crew

turning up very well, and mine was the first in the water. As soon as I had seen the falls unhooked, the ladder over, and the people who came from the dining saloon getting safely into the boat, I went along to help with the others.

"Most of the boats were being handled properly, and the crews were getting them away in a most efficient manner. It was only to be expected, however, in such circumstances, that trouble would be experienced with a few. These troubles always occur, more in some ships and less in others, but the majority are due to causes which no one can foresee or control. I should like to tell the armchair critics that with the most persistent drilling and finest foresight, there are no fixed rules about a sinking ship, and no textbooks to tell us beforehand which way any vessel will sink. These and a host of other details are presumably arranged in some sort of secret conference between King Neptune, Prince Chance, General Luck, with one or two other nebulous folk in attendance. The unfortunate sailorman only sees the plan as it is unfolded in actuality, while the skull and crossbones gentleman hovers overhead awaiting his chance to write the names of widows and orphans.

"Having seen all boats going well on the promenade deck, I went up to the boat deck. There, in spite of the grim surroundings, I could not help being amused at one of two incidents.

"Trouble was being experienced with the boat under the boatswain's care. The boatswain found some urgent work below when the explosion occurred, and when he did reach his boat he found two engineers trying to lower away without letting go the gripes. Just the sort of thing I expected! At their own job those engineers were among the best, but we need sailors for this work. I don't know what we shall do when the supply of men trained in sailing ships comes to an end.

"I found the butcher's mate, with his arm bleeding profusely, making a mess of the after fall. I cursed him roundly for the mess, but probably he was not to blame because, as I learned later, the explosion had occurred close to his cabin, and the

*Old man is a term commonly used in the mercantile marine, and applied to the commander.

poor chap's head had been dashed against the roof, with the result that he was half stunned.

"To get this boat clear we had to tighten up the falls and cut away the gripes before lowering.

"When that was finished, I noticed one of the poop boats lying in the water, with the falls unhooked. She was full of people and was heeling over in the wash of the propeller. I yelled to them to cut away the falls. Fortunately they heard me through all the noise, and got clear just in time to prevent being capsized.

"I went down to the poop, and there I found the firemen's boats half lowered with their ends cocked up. The falls had been let go, but had got hung up. The boats were filled with a groaning mass of colored firemen and coal trimmers; these helpless creatures were calling loudly on Allah and a thousand other deities, none of whom came forward to clear the tangle.

"Apparently the numerous deities were looking on while our third officer and a naval commander struggled with the falls. I turned to and lent a hand, and with the help of a quartermaster, who came along later, the four officers got the boat lowered. As soon as the black squad saw us lowering they stopped groaning and commenced giving orders with great cheerfulness.

"This scene brought a thought to my mind in the midst of the hullabaloo, and I remarked to the naval officer, 'All men are equal.' He replied, shortly, 'When they are dead.'

"While all this was happening, our Marconi operator, a slim, white-faced youth of twenty summers, but a Briton as true as any to the fine traditions of his service, had stuck to his job calling for assistance.

"Several destroyers arrived like express trains, and immediately put up a dense smoke screen. They also plastered the sea with shells in all directions and dropped depth charges to discourage Fritz from further activity. I was told that a second torpedo was fired and missed, but was too busy to look for more torpedoes after the first had done its work.

Searching for Stragglers.

"When the boats were all cleared and the destroyers had commenced taking the people aboard, I made a general tour of the ship to see if anyone was left aboard. I went all round the passengers' and crew's quarters shouting and listening for any reply.

"It was uncannily quiet, the ship was deserted. In the empty dining-saloon the dinner was on the tables, and the fans were whirring just as they had been left, but no one was about.

Examining the Wreckage.

"From there I went to the bridge and reported to the Captain 'boats all away.' The skipper sent me down to see what things were like forward. I found the forward hatch (No. 1) wrecked, and full of water, and all the accommodation under the fore-castle in an indescribable condition; in fact, it was almost reduced to pulp by the explosion. I tried to go below, but there I met nothing but the sea. The chain locker was blown away, and the starboard chain was hanging down. Rivets were out as far back as No. 2 hatch, which was filling steadily, and the ship was sinking at the rate of one inch per minute.

Casualties.

"In the upper peak I found an unconscious steward. With the aid of a quartermaster I dragged him out and put him into a lifeboat, which I hailed to come alongside. He died on board the destroyer with a broken skull. Another, in the lower peak, had been blown to smithereens. If the explosion had occurred half an hour sooner, many stewards would have been killed, but as it happened, they were nearly all serving dinner in the saloon.

Abandoning the Ship.

"Upon returning to the bridge, I reported fully to the Captain about the damage, and the rate she was settling down. We decided that we would try to get the ship to port, though it would have to be stern first.

"We signalled the destroyers, asking them to send our crew back, but they kept on whizzing round and firing without attempting to do as we asked.

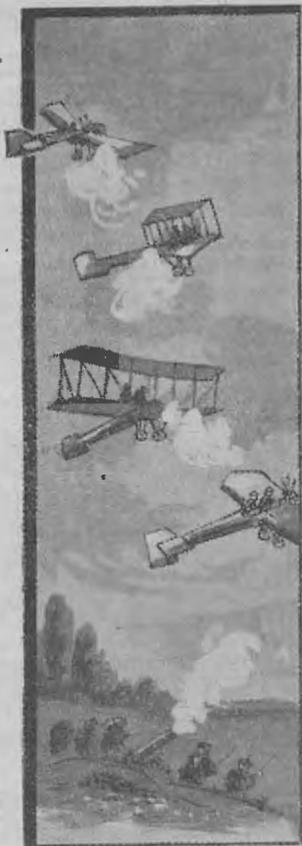
"After we had signalled for half an hour, we received a peremptory order, 'Abandon ship instantly,' so we were obliged to leave our old friend to her fate and go aboard a destroyer.

"I do not believe we could have got the ship in, but every true sailor man likes to try, and the last thing he cares about is to leave his vessel while there is an inch above water.

"As soon as we got aboard the destroyer, she steamed away at 25 knots, while we,

(Continued on Page 135)

Flying and Aviators



From the Four Winds.

Demand for Aeroplane Workers.

During the hearing of a case before the Russian Tribunal, at Caxton Hall, on December 11th, Sir Edward Smith, who presided, referred to the big demand for skilled workers in aircraft factories. He knew that in one factory, which now employed 2,000 men, it was proposed to increase the number to 5,000 in the next six months.

Carrying Capacity of Aeroplanes.

Rear-Admiral Robert E. Peary, of the United States, is optimistic and emphatic upon the future, and particularly the carrying capacity of aeroplanes in the days to come. He says that perhaps before the war is over, but certainly in the next war, if we have another, aeroplanes will carry artillery as heavy as the famous French 75's, and when that time comes the aeroplane will be invulnerable. It will be able to soar over any field, water, or mountainous country, carry enormous numbers of troops far behind the enemy lines, and to do the work of cavalry, infantry, and artillery combined. Admiral Peary, who has been intimately concerned with the development of a great aerial programme for America, also predicts German attacks in the not far distant future, on American coast cities.

The Work of Italian Aviators.

A semi-official statement issued in Rome announces that between October 25th, and November 30th,

Italian aerial squadrons carried out no fewer than 40 large bombarding operations. Altogether 242 Caproni aeroplanes participated in these operations, and they dropped a total of 45 tons of bombs and other explosives. Of this large number of aeroplanes only eight failed to return to their bases, and 32 pilots, observers, and machine-gunners were lost. During the same period, Italian airships executed 14 bombardments at night, and dropped 12 tons of bombs without suffering any loss.

Putting "L 29" To Good Use.

Inspired by the British idea of using a tank as a depot for the sale of War Bonds, the French, recently opened a loan office in the car of the Zeppelin "L 29" captured at Bourbonne-les-Bains. A large crowd of people anxious to have their script stamped with the Zeppelin stamp passes through an avenue of captured guns to the Zeppelin relics, in front of which is an aeroplane flown by the late Capt. Guynemer. A further privilege accorded to subscribers to the loan is a peep at tank 686.

Airship Crosses Mediterranean.

According to the "Matin," one of the French military airships has recently succeeded in crossing the Mediterranean. The airship started from Paris, reached Aubagne, near Marseilles, and arrived at Algiers without incident, after a journey lasting eleven hours.

Lieut. Bohme Killed.

A report from Amsterdam dated December 11, states that the German aviator, Lieutenant Erwin Bohme, the successor of Bolcke in the command of the latter's flying squadron, was killed on the Western front the day before the Kaiser awarded him the Order Pour Le Merite.

Lieutenant Bohme's name was first mentioned by German Main Headquarters on October 17, when he was reported to have shot down his 20th opponent in aerial battle. Between that date and November 30, when his name last appeared in the official reports, he is said to have accounted for four other enemy aviators. There has been no mention of his decoration by the Kaiser in the German communiques.

New Zealand Aviator Killed.

Lieutenant Frank Hamilton Bullock-Webster, Canadian Machine Gun Corps, attached R.F.C., who was shot down while fighting an enemy aeroplane on September 20, and died of wounds the same day, was the eldest son of H. Bullock-Webster, of Auckland, New Zealand. Born in the Waikato in 1885, he was in British Columbia, when war was declared, and immediately enlisted. He was soon given a commission in a Canadian battalion, and arrived in England in the Autumn of 1915. He was transferred to the Machine Gun Corps, and went to France in August, 1916, and was invalided home with trench fever in November. When he recovered he was transferred to the R.F.C. He went to the front again last July.

New World's Record.

A report from New York states that Lieutenant Resnabi, flying in a Caproni aeroplane, created the world's record on October 22, when he flew from Newport News to the Mineola military camp, a distance of 300 miles in 4 hours 15 minutes, while carrying eight men and flying at an altitude of 4500 feet.

The Young Briton and Aeroplane Development.

In the course of a recent speech Lord Rothmere referred to the quality of the young Briton as a flying man and of the continual development and improvement of aeroplanes. His Lordship stated:—

“The great asset of the Flying Services is the young Briton, whether born in these islands or in the Dominions oversea. He makes the ideal fighter, courageous, daring, with heaps of initiative. Our duty is to see that he obtains all he wants. His brief experience taught him that the production of aircraft in great numbers is not the easy task that many imagine. If the aeroplane had reached its ultimate development the task would not be anything like so difficult, but hardly a month passes without some step, very often a great step, being made in the improvement of the aeroplane. The output of machines has increased in a most satisfactory way, and no doubt that at the present rate of progress it will not be long before the many criticisms which have been levelled at the Air Ministry will be silenced.”

AN AERIAL MAIL SERVICE.

An agreement has been completed between the British and French Governments for the establishment of a permanent Aerial Postal Service between Paris and London.

In the past we have been accustomed to the carrying of special mails by aeroplanes, making exceptional spectacular flights, but this is the first instance of the establishment of a permanent and regular aeroplane service. It is the first stage of a movement which will spread rapidly to all parts of the world when the war is over.

A CAPTURED ZEPPELIN.

“Aeronautics” has published an interesting description of a Zeppelin raider which was captured intact in France:—

“The number L49 is well forward in immense white characters, and on the stern an Iron Cross is painted. From end to end the airship measures 144 metres (about 470 feet), and it has four cars. Two of the cars, each having a motor, are intact; another, containing two motors and two sets of steering gear, fell in a river, and the forward car, with its single motor, did not suffer. Each Mercedes motor is of 250 horse-power. The gasbag is formed of varnished material, white on the upper part and black elsewhere. The outer envelope is supported by a rigid aluminium structure which contains the hydrogen balloons. The mean speed of the Zeppelin must be from 55 to 60 miles per hour. Her crew was distributed in the different cars, which communicated by means of a central platform, and the machine itself, which is of the most recent type, is supplied with the latest improvements and is almost new. In the central gallery, which is ranged neatly in compartments, are all sorts of spare parts—oxygen apparatus for the use of the crew in great altitudes, and lifebuoys in case of a wreck at sea, hand grenades, parachutes, etc. She was able to carry about 11,500 kilograms (about 11½ tons) of explosives, and she had a very well fitted up wireless room.

AERIAL NEWS.

(From London.)

The Ultimate Effect of Aerial Warfare.

Mr. Lloyd George is a man blessed with a vivid imagination, which enables him to make many sound forecasts.

Speaking at a dinner at Gray's Inn (Eng.), recently, the Prime Minister stated: “Let me express how honoured I feel to be invited to this historic building to meet representatives of the most romantic service in this war. I have sometimes felt that the operations of the Air Service will, probably, have great effect in determining the nations that this must be the last war than any other weapons, however terrible their effect. They bring home to the people, who in former wars dwelt in security, something of the perils and the horrors of the battlefield; and, as the war goes on, these will spread and increase and intensify. These winged messengers of death, therefore, may well be angels of peace. But we must also remember that, while all that is true, they also give a greater significance and permanence to either victory or defeat. For, however unjust or oppressive might be the peace imposed on us, the new terror added to war by this new weapon of dismay will create an increased reluctance on the part of the world to challenge the issue anew.”

Reprisals.

At the same dinner Lord Rothmere threw an interesting light upon the Air Board's attitude towards the much discussed question of reprisals against German towns. In the course of his speech, Lord Rothmere said:—

“At the Air Board we are wholeheartedly in favor of air reprisals. As the enemy elects, so it will be the case of ‘eye for an eye, and a tooth for a tooth,’ and in this respect we shall slave for complete and satisfying retaliation. General Ludendorff proclaims the war a war of nations, suggesting that the civilian population is as much a mark for the airman's bombs as the fighting man. We detest these doctrines, holding them to be grossly immoral. But in fighting for our lives and the lives of our women and children we cannot, and we will not, consent to their one-sided application. We are determined, in other words, that whatever outrages are committed on the civilian population of this country will be met by similar treatment upon his own people.”

A FLYING BURGLAR.

In France recently Sub-Lieutenant Georges Gayral and a woman were arrested for a series of burglaries which had been carried on in a very romantic fashion.

Gayral and his fair companion were accustomed to making frequent joy-rides in his machine at night, in the neighbourhood of Le Crotoy.

A succession of burglaries, including one in Mme. Sarah Bernhardt's villa at Belle-Ile, and the frequent despatch of heavy cases to Paris by Gayral, provided, in addition to the nocturnal joy-rides, circumstantial evidence, which led to the arrest and subsequent conviction of this pair of “angelic housebreakers.”



MUFTI AND UNIFORM.

When one thinks of those serving King and country abroad, either afloat or ashore, the mind instantly reverts to the severity of the weather they encounter during the winter. Then the advantages of a cardigan jacket come to mind, and we visualise a rather thick and heavy garment, the popular belief being that weight is essential for the sake of warmth. Though the winter has just passed, many Australasians will no doubt be preparing for the near winter season, so it will be interesting to learn that a soldier on service writing on the matter of personal equipment explodes the popular impression regarding such jackets, and points out that his experience has conclusively proved that the warmest cardigan jacket is one that will crumple up to such dimensions that a man may easily slip it into a tunic pocket. The weight of the garment is a very few ounces, yet it is undoubtedly as warm as the thickest and heaviest cardigan ever made, this result being obtained by the use of what is known generally as "camel fleece," though probably the nearest that a camel ever got to the stuff was when he walked past the factory on stilts. Be this as it may, this camel fleece stuff is amazingly warm for its weight and bulk, and the man who wants a cardigan jacket for winter wear under his tunic, and yet does not want to bulge out at unexpected points, would do well to give this form of winter wear a trial. Being woven after the manner of woollen fabrics, it is self-ventilating, it is well-made, and will settle to the contour of the wearer's body much as what a woman calls a "sport coat" (because she wears it to do the morning's shopping, as a rule), settles to her figure. That is to say, there is a comfortable elasticity about the stuff, which, as already remarked, leaves the ordinary cardigan far behind in the matter of warmth for weight, and makes ideal service wear for winter work.

Since the outbreak of war the question of effective body armour has been one of paramount importance. Numerous ideas have been advanced and suggestions acted upon, but out of the whole lot of them nothing practical has resulted. It would appear, however, that an English firm is meeting

with some success in this connection, having produced a non-metallic shield that has proved of value. Although this shield is of fabric only, you cannot push a bayonet point through it, and it is also proof against revolver bullets at decisive ranges, while time after time it has stopped pieces of shrapnel that would otherwise have inflicted fatal wounds. It is lighter and more comfortable in wear than metal shields—so far is this true, in fact, that in winter a shield of this pattern forms an excellent warm garment for wear under the tunic. There are in existence scores of statements from men on active service to show that the shield in question has saved lives, and there are in existence, too, photographs which show beyond question how it has stopped shrapnel fragments and revolver bullets. It is a distinct asset to any man who has to go "over the top," performing the same service for his body that the service steel helmet performs for his head.

Tailors in Australasia are now opening up their winter suitings, and although one might surmise conditions arising from the war would reduce the variety and range of offerings, it seems that those who desire new winter apparel are to have a very liberal selection of patterns and styles to choose from. A visit to the more important tailoring establishments leaves the impression that brown and deep grey will be more popular than ever this winter, among those who cannot don khaki. Most tailors think that there will be no change in the "cut" of clothing.

A visit to most men's outfitting establishments as well as the "booteries" confirms the idea that among customers tan is the usual choice and most customers disclose a liking for the military shape.

Smokers, in and out of uniform, have troubled little over the increase in the cost of imported tobaccos. When the announcement was made that prices were to be advanced, the "man on the street" recalled the fact that one of the big tobacco companies balance-sheet disclosing a substantial profit on the twelve months trading had been published a few days previous, and offered some comment of an interesting nature, but later on he and those listening no doubt remembered the fact that tobacco is a luxury and those who indulge in luxuries must pay for them or go without. "My Lady Nicotine" has remarkable powers of attraction, so to go without was not considered, hence we notice just as many pipes, cigars, and cigarettes as ever.

A man wears undervests, so why not undersocks? Naturally, for normal everyday wear, the man in question would smile at the idea of undersocks; but when it is no longer possible to get a bath every day, and foot-comfort becomes of just as much importance as the square meal that a man really wants, then undersocks, absorbent, comfort-giving, and cheap, have a value of their own. You do not need an extra size of boot in order to get the advantages of these socks; you just put them inside the ordinary socks, and they absorb and neutralise all perspiration, and keep the feet healthy and comfortable, not only absorbing the perspiration, but preventing unhealthy and irritant dyes in the ordinary socks, from reaching the feet, since they are medicated for that purpose.

With the Merchant Service.

Concrete Vessels to be Built at Greenock.

It is understood that negotiations are proceeding for the construction of a ship-yard at Greenock, which will be devoted to the construction of concrete vessels.

Activity in Norwegian Yards.

Norwegian ship-yards have on order for Swedish owners a total gross tonnage of 142,000 tons, including a number of steamers and six twin-screw motor ships to be fitted with Burmeister and Wain Diesel engines.

A Big Shipping Transaction.

Rankin Gilmour and Coy., Ltd., Liverpool, have disposed of fourteen of their fine cargo carriers to Messrs. T. and J. Harrison, of Liverpool. The vessels range in size from 4,000 to 5,500 tons register, and several of them are known in Australian waters. The fleet includes: The Saint Andrew, Saint Bede, Saint Dunstan, Saint Egbert, Saint George, Saint Hugo, Saint Leonards, Saint Michael, Saint Patrick, Saint Quenton, Saint Ronald, Saint Stephen, Saint Winifred and Saint Veronica.

Large Floating Crane.

The largest floating crane built in the United States, and the first large rotating pontoon, has been fitted out at the Navy yard, Norfolk, Va. The boom is 135-ft. long, with a capacity of 150 tons. The main hoist consists of two units of 75 tons capacity, and an auxiliary hoist of 25 tons capacity, movable up and down the boom for 187ft. Power for the main hoist is supplied by a couple of 60 h.p. motors, which may be used separately; the auxiliary hoist has also two motors, one for hoisting and the other for travelling up and down the boom.

A Famous Shipbuilder.

We are sorry to have to record the death of Mr. Alexander Adamson, a Glasgow naval architect, well known as the designer of many famous vessels. When shipyard manager to the Fairfield Shipbuilding Engineering Co., Ltd., he turned out the "Alaska" and the "Arizona," the first two Atlantic greyhounds, the Cunard liners. "Etruria" and "Umbria," and also about 180 other vessels, and when with Palmer's Shipbuilding and Iron Co., Ltd., of Jarrow, and Sir W. G. Armstrong Whitworth and Co., of Elswick, he was associated with the construction of 90 other crafts, and as managing director at the Barrow yard of Messrs. Vickers, Ltd., he built 390, including 40 war vessels.

Large Shipbuilding Combine.

In order to expedite the construction of vessels for the United States Government, a new company has been formed with a capital of £4,000,000 to take over the works of the Pennsylvania Shipbuilding Company, the New Jersey Shipbuilding Company and the Pusey and Jones Company of Wilmington, Delaware.

For the purpose of building cargo vessels for the United States Government, the Merrill-Stevens Company of Jacksonville, Florida, has opened a new yard on the St. John's River.

The importance of River navigation in the United States is emphasised by the fact that an appropriation equal to £700,000 has been made by the Government for the promotion of better traffic conditions on the Mississippi River.

SHIPBUILDING AT KOBE.

A large extension of equipment is projected by the Mitsubishi Dockyard and Engine Works, at Kobe. The Company is to build four steamers this year, ranging from 2,000 to 6,000 tons, while the construction of other vessels on its own account is also contemplated. To meet the increased demand for building capacity, the management has undertaken the construction of two new docks, and a floating dock of 20,000 tons lifting capacity. It is said that when these new projects are completed, the Mitsubishi yard will be able to build ships aggregating 60,000 tons a year.

Punctured.

(Continued from page 131)

particularly the Captain, hummed and coughed and hissed and said unprintable things, which, being interpreted, meant 'German very bad man, all same devil.'

"We were very well treated on board the destroyers, and all were thankful to get home safely, but we felt sad at losing our fine ship, besides regretting that we were not able to stand by until she took her final plunge.

"All hands from under the fore-castle were badly shaken and knocked about. Many of them had been thrown up against the overhead deck of their quarters by the force of the explosion.

"About the only people who took any personal belongings away from the sinking vessel were the Hindu Serang, who saved his leather portmanteau, and a lady passenger, who took her jewel case and money, but left them in the lifeboat.

"It is nothing but a memory now, and just such an incident as is happening daily to hundreds. I am going back to sea in the first ship available."

Our Maritime Peril.

(Continued from page 84)

launched, all augured well. This vessel was named Bremen, and she sailed from the Weser on June 19th, 1858, bound for New York.

The service to England must, of course, be regarded as the first business venture of the N.D.L., but the career of insidious and wily development began from 4th July in the year stated, on which day the Bremen arrived at New York, and it is from that point we will construct the story of the great menace in the next issue.



MATRON and MAID

Conducted by RONA.

Winter approaches and is bringing with it the usual question concerning warm wearing apparel, especially among those engaged in activities consequent upon the war. Naturally, one thinks of additional garments, and the idea is the one nearly always fallen back upon. Among the many propositions embraced under the "additional" garment heading, is a leather undercoat, which has found great favor in England. They are sleeveless, and are made much the same as a waist-coat. They are made of the softest and most pliable leather, and the warmth they give is considerable. They are made to slip under any coat in the easiest, most simple manner in the world, at once making all the difference in the well-being of the wearer. A belt gathers the fullness together at the waist, two large side pockets bear witness to the fact that in these utilitarian times a woman can hardly be too bepocketed, and the whole thing is a masterpiece as far as workmanship is concerned.

Matrons have been seriously troubled concerning the mysterious disease the medical fraternity have dubbed X. Fortunately, though still in doubt concerning its origin, the men of medicine appear to have discovered a system of treatment that at last gives those attacked a fighting chance, which accounts for the few deaths reported during the last few weeks.

Though slow in making its appearance the entry of woman into occupations that before the war were usually regarded as men's special preserves is becoming more apparent in Australian cities. One needs but arrive in the city any morning between 8 and 9 a.m. to have ample evidence of it for all the main arteries to the commercial quarters are simply crammed with the future mothers of Australia. Commenting on this fact recently, a visitor to the city, after remarking how fresh looking the girls were, also that in such perfect weather the bright colours gave our usually sombre cities quite a gala appearance, added, "Why they go to work with the same spirit they have when setting out

on a picnic, not like most men do, wearing an air of dejection."

One of the best-known children's outfitters in the United Kingdom has brought out a delightful notion for winter wear. They are selling fascination knitted coats, with long leggings to precisely match. Clad like this a child is warm from head to foot, besides having the most practical, durable, cosy garments. The coats are made in two shapes, either double-breasted and on the short side, or high up to the neck and then rather longer.

The leggings are as well thought out as such a thing can be. They come well over the shoe in a spar-like point, and higher on one side than the other, buttoning on the small wearer's knickers, so that they are always taut and tidy-looking. Nothing is more protective or warmer for a child's legs than this kind of thing, and nothing by any possibility better solves the difficult problem of their winter clothing.

Australasian women are still upholding the great reputation they have gained for their earnestness in connection with war work, and well deserved praise continues to be showered on them from all parts of the world. Lady Davidson, with her wide experience of happenings in far away Newfoundland, as well as in the world's metropolis, London, and other centres, cannot speak too highly of their efforts, and has frequently remarked that it affords her both pleasure and satisfaction to become associated with such valiant workers as those she has met in this part of the world. Great as has been the activity in the past, there is every indication that even greater efforts will be put forward in the future, and in more ways than ever. This is obvious from the fact that at "Dream City," Sydney, on a recent Sunday fully 150 women were engaged in shovelling sand, hauling trucks, and like work essential in clearing land preparatory to building. Though many of the workers were of frail physique one and all performed the allotted tasks with cheerfulness, not to say the vigor of the strongest man.