How Britain Can Recover Atlantic Steamship Speed Blue Ribbon

CAUSE OF LOSS OF THE PREMIER POSITION

Increasing Power Without Increasing the Weight Driven Will Increase Speed

(By Sir John Biles)

Now that the fastest ship on the Atlantic is not British, it may be of interest to reflect on what is the cause of the loss of the premier position in shipbuilding by the British Mercantile Marine.

In 1906 the Lusitania and the Mauretania were undoubtedly the fastest Atlantic liners afloat, having a speed of 26 knots, and no attempt was made to surpass them in speed until the German ships Europa and Bremen were laid down in 1926.

The Vaterland (now the Leviathan) and the Imperator (now the Berengaria) were built by the Germans. These were followed by the Bismarck (now the Majestic) and some other slower vessels.

The Aquitania, of the Cunard Line, and the three other named vessels had speeds of about 24 knots. The most striking point about the German ships was that they had boilers in which the fire is outside the tubes containing the water, called water-tube boilers, while the British ships adhered to the cylindrical boilers in which the fire is inside the tubes, usually called Scottish boilers.

The Lusitania and the Mauretania were smaller ships than the Aquitania, Imperator, Vaterland, and the Bismarck, and it would therefore appear that to obtain the greatest speed it is not necessary to adopt water-tube boilers, at any rate the adoption of water-tube boilers was not associated with the greatest speed.

It is, however, the horsepower per ton of weight driven that determines the speed, supposing that the ship design is in all cases equally good. In the case of the Mauretania this is about 2 h.p. per ton of weight driven, while in the other four ships it is about 1 to 1.2.

Anything that can be done to increase the power without increasing the weight driven will increase the speed. To increase the power without increasing the weight of machinery and fuel will increase the speed.

The type of boiler which for a ton of weight gives to the steam the greatest amount of energy per ton of fuel used is the boiler from which the greatest speed of a ship may be expected.

The water-tube boiler has two advantages over the Scottish boiler:

First, it can burn more oil fuel per square foot of heating surface;

Second, it can deliver the steam at a higher pressure and greater efficiency.

In a Scottish boiler each 35 square feet of heating surface involves a ton of boiler weight, while in a water-tube boiler at least one-half more surface can be got per ton of weight. Hence for every ton of weight we can get 50 per cent. more steam from a water-tube boiler than from a Scottish at the same pressure, and we can get 20 per cent. more oil burnt. Also, we can get a higher pressure and increased efficiency.

Applying this to the weight of the Mauretania's boilers, which are nearly one half of her total machinery weight, we can get an increase of power of well over 20 per cent., and an increase of speed of well on to 2 knots, nearly sufficient, if not quite, to equal the Bremen's speed.

Thus we see that the effect of boiler design is sufficient to deserve the most serious consideration if we are to get back the Blue Ribbon of the Atlantic.

The whole of the weight saved in boilers cannot be used for increasing power unless we can get across the Atlantic for the same weight of fuel.

The Bremen, which is the cause of all this talk, carries about the same weight of fuel as the Mauretania, while her machinery weighs 20 per cent. less than the Mauretania's. Dr. Bauer, the designer of her machinery, announces that he is prepared to produce a 4-day ship whose machinery will be 10 per cent. lighter than the Mauretania's. It looks as if unless something on the same lines is undertaken by us we shall be out of the running.

Some responsible officials are reluctant to adopt water-tube boilers, which will give the highest speed, though they have been at the root of the success of the German steamers. The use of water-tube boilers in Atlantic liners has been forced on shipowners in this country by the acquisition of the German-built ships after the war, and though the result has been most successful they shrink from repeating the practice. The Navy has adopted watertube boilers exclusively for the last 20 years, and yet those responsible for these fast Atlantic liners hesitate to take the step.

The alternative to the water-tube boilers for the highest speed is the adoption of a large number of Diesel engines accumulating and transforming their power by means of dynamos and motors. This is far more experimental than a water-tube boiler project.

These highly developed types of machinery involve the use of highly developed brains for controlling them, and the present state of the organization of shipowning companies may not seem to encourage this kind of innovation.

Light Has Weight Einstein Claims

Prof. A. H. S. Gillson, of McGill, Discusses Strange Conclusions

Einstein's experiments lead to some extraordinary conclusions, one of which is that the universe is a large box.

Calculations based upon the relativity theory show that the sun came into being at a definite time and that the world took shape three thousand million years ago.

Other conclusions from Einstein's great experiments indicated that the geometry taught in schools is quite inaccurate and that it may sometime be replaced by a geometry of curved space.

Measurable Weight

That light has weight which is measurable was also shown, the speaker said. It has been estimated that 160 tons of light fall upon the earth daily. At the rate which light is sold by a local power company, the value of the light energy falling upon the earth is at the rate of $420,000,000 per pound, the lecturer said.

Calculations based upon Einstein's findings show that time and space are not fixed as in ordinary thought. These depend upon velocity. A train moving will be found to have a shorter length than one at rest. Also a clock indicates lesser time as its velocity is increased. It it were possible to throw a clock to give it a velocity equal to that of light, 186,000 miles per second, then time would cease to be recorded.

Perpetual Youth

Perpetual youth would in the same way be attained if man could reach a velocity equal to that of light. However, the lecturer added, the man would not be visible to his friends as his mass would become infinitesimal.

Calculations from one of Einstein's equations demonstrates that there is enough energy in an ounce of cheese lift a weight of 30,000,000 tons to the top of Eiffel tower while a pound of chees could provide enough energy to raise 2,000,000 dreadnoughts to a height of 2,000 miles.

The sun, it is estimated, is losing through dissipation of energy, 360,000 million tons of its weight per day. The mass of the sun being known, it is estimated that enough remains so that the sun still has 15,000,000 million years to go on giving out its energy.

The Great Empire Red Cross Conference

Many interesting features will characterize the forthcoming British Empire Red Cross Conference which is to take place in May in London, England, according to information now in the hands of the Headquarters' officials of the Canadian Red Cross Society in Toronto.

The session of this unique gathering will be held in the historic St. James' Palace, which is now so prominently before the eyes of the world as the meeting place of the Disarmament Conference.

On May 20th its plenary session will be presided over by the Duke of York, while Princess Mary is scheduled to inspect the various V.A.D. detachments, present from many parts of the United Kingdom.

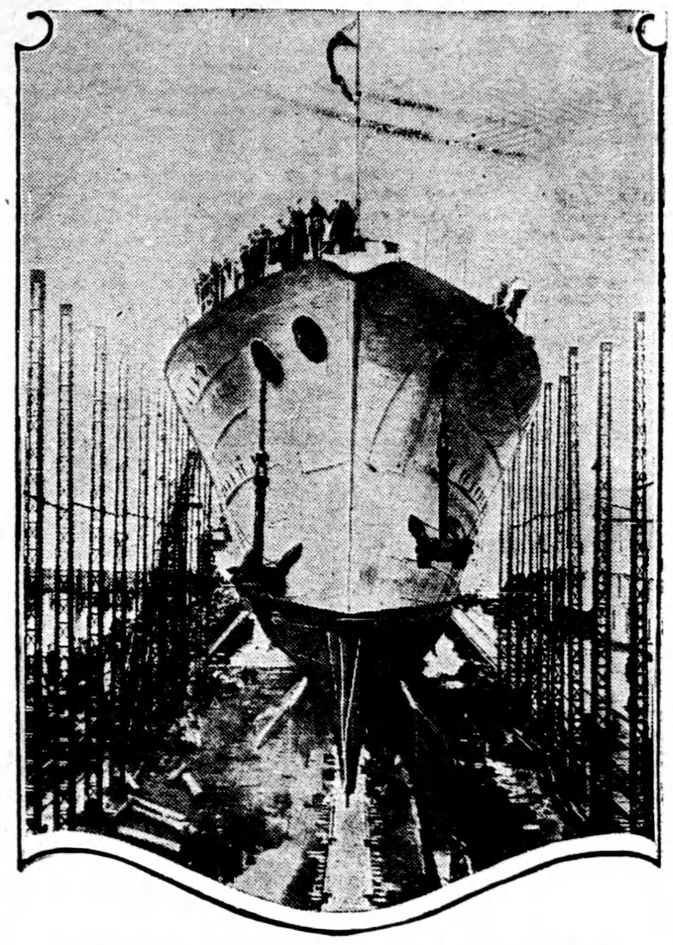
Invitations to send delegates to this Empire-wide conference of Red Cross workers have been issued by Brigadier-General H. B. Champain of the British Red Cross Society, who has followed a new precedent by asking attendance of representatives from all overseas parts of the Empire, large or small, and irrespective of whether they possess organized Red Cross Societies or not.

The agenda as foreshadowed by the tentative programme will be very broad as it will deal with not only Empire and national activities but with many international aspects of Red Cross work. Some of its proposed features include addresses from prominent health or educational authorities, demonstrations in London County Council Schools, an elaborate Junior Red Cross Empire Pageant, the possibilities of co-operative effort of Junior Red Cross with all other organizations of juveniles within the Empire, and the widest discussion of the international and imperial aspects of the Red Cross.

The Canadian Red Cross Society will send at least official delegates to the Empire Conference with several additional representatives who will be named by the Central Council on March 27th.

She—"Now you pride yourself on being able to judge a woman's character by her clothes. What would be your verdict on my sister over there?" He (looking at her sister's scant attire)—"Insufficient evidence."

France Builds Wonderful New Cruiser



MOST MODERN TRAINING SHIP IN WORLD'S NAVIES

We see here the new French cruiser, Jeanne D'Arc, taking the slips at her recent launching at St. Nazaire, France. It will be used as school for training of naval officers.

Globe-Trotting Reporter Meets Ghastly Death

Body of Dr. Kurt Faber, Mangled By Wolves, Found in North

Edmonton, Alta.—Dr. Kurt Faber, noted Berlin journalist, who plodded into the North Country five months ago, is dead—a victim of the Northland's rigors. A terse telegram from a Royal Canadian Mounted Police Post in the North-West Territories tells of his body being found, torn and mangled by roaming wolves.

Last summer the German scientist-writer had travelled North from Edmonton. At Fort Vermilion he planned to circle North and East on a journey of almost 1,000 miles, most of which he planned to traverse on foot.

Dr. Faber had been sought by police patrols and by radio broadcasts for some weeks in an effort to inform him that his mother had died in Berlin. Dr. K. Martin, German Consul at Winnipeg, had been requested from Germany to transmit the information to the globetrotting reporter.

From Fort Vermilion, which he had reached by river-boat, to the Upper Hay River Post, Dr. Faber had travelled by canoe, portaging from the source of one river to the origin of another in his struggle into the Northern barrens. His death is believed to have occurred as he paddled north along the river toward the Great Slave. The meagre statement from the post of the Mounties may mean that the journalist fell exhausted or that his body was washed ashore after his canoe had been dashed to pieces in a rapids.

only

"Man to-day can fly like a bird, but man will never be able to sit comfortably on a barbed wire fence."—Lord Dewar.

'There is not a woman living who is physically or mentally capable of telling the true story of her life."—Peggy Hopkins Joyce.

Official History Of War is Urged

Canadian Legion of British Legion Sends Request to Ottawa

Ottawa—Believing that the time has come when an official history of the part played by men of Canada in the Great War hould be written, the Canadian legion of the British legion, in its representations of Parliament at the present session, is putting forward a strong request that the writing of this history be undertaken at once, and that it shall be a true record of the sacrifice, the suffering and the achievements of the soldiers, sailors and airmen of Canada, with that theme the predominant note in any such history.

The Legion's attitude is based partly on the prevalence of war histories which pay very little attention to the part of Canada's men in the field, and partly on the thought this history should be written while the men who could make vital contributions to it, in the way of actual experiences and accurate records, are still alive. It is believed, too, that this history should be undertaken by the Dominion Government, and that when it is completed, it should be used as the official text-book on the great war in all the public schools and high schools and collegiate institutes throughout the Dominion.

First Highwayman—"Say, is there any danger in this business?"

Second Highwayman—"No, not unless you get shot."

Ready for Anything Kaye Don Prepared

British Racing Motorist Will Drive Mammoth "Silver Bullet" Sunbeam Weighing Seven Tons With Engines Developing 2,000 Horse Power at Daytona Beach

New York.—Another carefree, smiling Briton is in the United States to challenge death and man-made speeds on the steel hard sands of Daytona Beach.

This time it is Kaye Don, crack British race driver, who will follow in the wheel ruts made by his famous British predessor, Major Sir H. Segrave, last March, on the Florida sands that have cos ttwo speed kings their lives. Segrave drove his roaring Golden Arrow Sunbeam at the amazing speed of 231.33 miles an hour to set the record.

Don, a good-natured veteran of Great War Days, will try to smash that record in a bigger, and he thinks better Sunbeam. This one a mammoth seven-ton creation in silver gray labelled the "Silver Bullet. It is his turn to drive because Segrave, one of his best friends, has definitely turned from automobile record smashing to his first love, the building of a speed boat that will conquer all time standards on the water.

Don is a bachelor of 36, tall, well set up, with Sandy hair, a brisk tan mustache, blue eyes and a pair of deep dimples at the corners of his moth. He drives purely for the sport of the thing, was the British champion in 1928 and 1929, has never piloted a machine faster than 162 miles an hour, and flew a bomber in France during the war.

"If we consider," he said, "what is done in the air, we can realize that a human being should be able to travel faster than 250 miles an hour on land. Within five years, the record should be close to 300 miles an hour. It is all a question of stream lining," he said.

The "Silver Bullet," which has never been driven, but has a theoretical speed of 260 miles an hour is a great improvement over Segrave's "Golden Arrow" in evading wind resistance, Don said. The new car is 30 feet long, weighs seven tons, has two stabilizing fins to keep it on the ground, and is equipped with silk tires 37 inches in diameter and lightly covered with rubber, the tires are tested to last four minutes at a speed of 300 miles an hour.

The "Bullet" is powered by two 12-cylinder aviation engines in tandem, developing 2,000 horsepower, three times as much as Segrave's "Golden Arrow." It has three speeds and should travel at the rate of 90 miles an hour in first, 180 in second, 260 in high.

Our Tourist Trade

According to the estimate of the Provincial Minister of Roads, who ought to know, tourists last year brought a revenue of some sixty-two million dollars to this province, and it is estimated that they will bring seventy-five millions during the present year. When it is borne in mind that the Dominion Bureau of Statistics shows a total revenue for the Dominion from the tourist traffic of over two hundred and fifty million dollars, Quebec's share is seen to be a very large one. tI is all the more necessary that the people of this province should be alive to the necessity of fostering the tourist trade in every legitimate manner.—Montreal Star.

"The theatre to-day is not more vulgar; it's just more natural."—Helen Kane.

"It is only ignorant people who are ashamed to confess ignorance."—Clarence Darrow.

Judge—"Prisoner, the jury finds you guilty." Prisoner—"That's all right, judge. I know you're too intelligent to be influenced by what they say."

New Town Safe

Perplexing Problem of Water Supply for Port Churchill Now Solved

Ottawa.—A solution has just been found for one of the most perplexing engineering problems in the development of northern Canada, namely, supply of water for the coming port and city of Churchill, terminus of the Hudson Bay Railway.

Ordinary methods of piping water below the frost line fail up there because borings as deep as 117 feet have reached solid rock before coming to the end of the frozen soil. Churchill will be founded on eternal frost—or at least frost that has been present since the glacial ages, tens of thousands of years ago.

Pipes laid through that frozen subsoil would freeze solid in an hour, according to D. W. Lachlan, engineer of the department of railways and canals, who has been coping with subarctic conditions at Churchill and Nelson for seventeen years.

Plans are being completed these days for the location of a pipe line to be laid in dry moss, to thickness of at least four feet to protect the water from the long cold weather and the bitter sea gales.

The source of Churchill water will be Grassy Slough, a depression not far from the famous Rosabella Lake, named after the wife of William Beech, who homesteaded there in 1905

Steam shovels will gouge out Grassy Slough to a depth of some twenty feet. If necessary, Rosabella Lake and a large area to the south can be drained into the reservoir. The land has been taken over by the government to prevent squatters locating in the water drainage area. A line is being located, with two pumping stations on the escarpment above the present site of the town and the docks to bring the water the four or five miles down to the port.

The water pipe itself will be supported on wooden posts driven into the clay and sticking up four feet or more above the ground. Above that in a mound reaching four feet above the pipe dry moss will be piled. That will be capped with sheet-iron and thatched straw to prevent the moss from getting wet, and from turning it into a good-conductor of cold.

Children's Aid Does Valuable Work

Children Placed in Good Homes Are Average Good Youngsters and Turn Out Well

Quite an extensive work is carried on in Ontario in the direction of providing orphan or destitute children with good homes in private families, and with a view to giving readers some information regarding this laudable work our representative recently had a talk with Mr. J. J. Kelso, who is in charge of the Children's Aid Branch of Ontario Government Service.

Naturally the first question asked was, "Where do the children come from?"

"Well," was the reply, "there are a variety of ways in which children become homeless. Very often the death of a mother throws children on the world uncared for, the father indifferent and neglecting to provide proper home life for the children. Frequently, also children are placed in public institutions or with private parties by the parents, who then disappear; some parents have no affection for their children and cannot be made provide for them properly; while in other cases the relatives have fallen into evil habits and the child for its own protection has to be removed from their control."

"Are not such children an undesirable class for adoption?" Mr. Kelso was asked.

"No ,there is a good deal of misconception on this point. People frequently imagine that homeless children must necessarily be plain-looking, bad tempered and evil-minded, but such is not the case. As a rule they compare favorably with the average run of children."

"Where should application be made?"

Anyone wishing a child has only to address a letter to the SeSecretary of the Children's Aid Society of their City or County. There are over sixty organizations in this work, or they can apply direct to my office." The older boys and girls are taken partly for the assistance they can give, but the majority of people desire to satisfy the craving of lonely hearts for children to love and cherish.'"

Fairy Tea

A fairy who went visiting
  Arrived at half-past three;
Her hostess said: "I am so glad
  You came in time for tea,
For I have some honeyed roseleaves
  And fresh dew brought by the elves,
So make yourself at home, and then
  We'll eat them all ourselves."

"I do not believe in that word Fate. It is the refuge of every self-confessed failure."—Andrew Soutar.

"If atheism wins over a whole population, the nation must disappear."—Will Durant.

Thrills of Mountain Motoring Becoming Popular

WHERE SHARP TURNS AND STEEP GRADES PREDOMINATE

One needs a quick eye and a quicker foot on this moun-tain highway, the Cavel motor road in the Jasper National Park, Alberta.