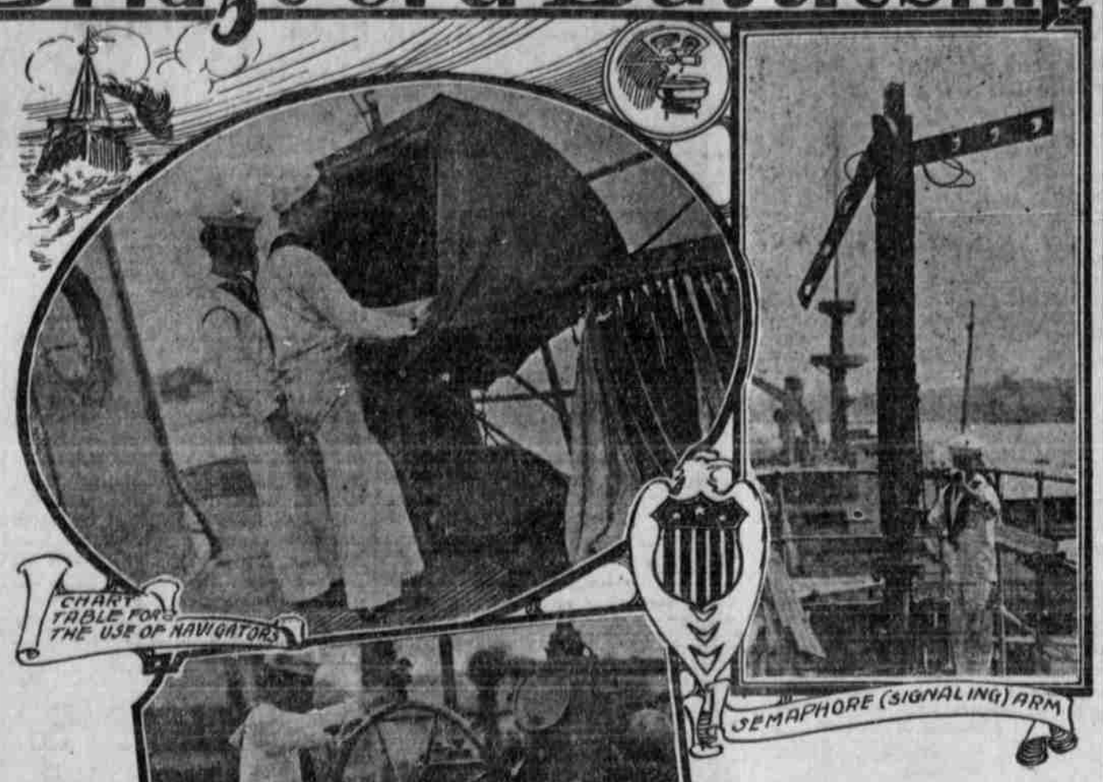
On the Bridge of a Battleship

THE modern battleship is a marvel of concentration and space economy. There is no room for things purely ornamental, but every foot of space is used to some purpose in connection with the storage or operation of the myriad adjuncts necessary for the work, the safety and the comfort of the hundreds of men who crowd one of these floating fortresses. If one were to choose, however, the one section of a battleship which above all others is a veritable nest of wonders and surprises choice would unhesitatingly fall upon the "bridge"—that elevated structure which is so appropriately named and which extends the full width of the deck on the forward part of the ship—in front of the huge smokestacks, as a "land lubber" might designate its location.

For one thing, we find on the bridge an even greater array than anywhere else on the ship of those remarkable mechanical and electrical devices which do so much of the work on shipboard that would seem to require human intelligence. But the bridge has in addition a special significance which multiplies many times its importance and the interest of its equipment. It is the "nerve center" of the ship, the seat of authority and command which directs all the operations within the bounds of the big armorclad, and also the intelligence office through which this warship community communicates other vessels of the fleet and, indeed, with the entire outside world.

Under ordinary conditions when the battleship is cruising at sea, participating in battle drill or target practise or engaged in any of the other important functions of a sea warrior the captain commanding, the navigating officer and other responsible officials of the ship have their positions on the bridge. In time of actual battle those directing heads of the fighting machine would not expose themselves on the bridge, but they would not be far away. Sheltered by conning towers or some other protective screens, they would be as near as possible to the vantage points to be found only on the exposed bridge and from those substitute observatories—some of them located directly behind or otherwise adjacent to the bridge—would direct the action of the battling armorclad.



In order to enable the officers on the bridge to be at all times closely in touch with all parts of the ship this elevated promenade is made the nerve center of elaborate telephone, telegraph and signaling systems that afford instantaneous communication with the engine and fire rooms, the ammunition magazines, all the different "gun stations" throughout the ship, and, in fact, every scene of activity that has part in the complex mission of one of these great fighting machines. The telephone system on a battleship is much like the private telephone system in a great store or manufactory, but with the difference that on shipboard most of the receivers are of the pattern which fit close to the head, covering both ears and strongly resembling those used by the hello girls in telephone exchanges. This special equipment is designed to shut out disturbing noises and is very essential when officers and men may be called upon to listen to telephone conversation when the guns are roaring or against the opposition of the various distracting noises always to be encountered on shipboard.

Near the bridge of a battleship is the wireless telegraph station which is one of the newer yet easily one of the most important adjuncts of the up-to-date battleship. However, the wireless telegraph is not used for interior communication aboard the battleship but solely for the exchange of messages with other ships and with shore stations. What are sometimes referred to as "telegraphs" on shipboard are not telegraphs at all, as the lay reader understands them, but are rather signaling systems. The most common of these communicative systems is that whereby the pressure of a button or lever at one station on a battleship—say on the bridge—will cause a printed command to suddenly appear in illuminated form in a distant part of the ship. For instance, the movement of a certain lever on the bridge of the battleship will cause an illuminated sign to suddenly appear before the eyes of the engineers, 'way down below the water line, reading, "Full Speed Ahead," or "Full Speed Astern," or any other command which it is desired to give. By means of this method of signaling a command can, if need be, be communicated simultaneously to a number of different stations scattered throughout the ship. Indeed it is by this expedient that the captain of the battleship insures uniformity of action during target practise or in battle. In a twinkling he can send the command "Begin firing" or "Cease firing," or any other instructions to each and every gun crew scattered throughout the length of the ship.

On the bridge, likewise, we find all the paraphernalia for steering the ship, including the great wheel, the electrical control, the compasses, the chart board, with its stores of charts and all the other mechanical adjuncts for keeping the huge vessel on the proper course. Here, too, are the seemingly simple devices which now control the manipulation of the huge searchlights perched up aloft on skeleton steel towers—a means of managing the searchlights which is not only more rapid but more effective than the old plan of turning them this way and that by manual labor. On the bridge, too, are no end of signaling devices for supplementing the wireless telegraph in communication with other ships or with the shore. There are signal flags for use with various codes and with the always useful "wigwag;" there are the semaphore and Ardois systems for signaling at night by means of different combinations of red and white lights, and there is the electric torch for unofficial messages.

The American navy has been the most successful military organization, from its very inception, which the world has ever seen. That is a pretty broad statement, but it is absolutely true. There are good reasons for this.

In the early days we were a commercial people. We were natural sailormen. Our people lived along the shores. They made their money in commercial pursuits. The men who commanded merchant ships were not only good sailors; they were good merchants, and the foundations for many of the great fortunes of this country have come from that source. In order to protect themselves they were obliged to go armed. Their ships were armed as were privateers in time of war. The result is that they not only knew navigation, but they knew gunnery, and combined with these qualities the intelligence which makes great merchants.

Naturally, when those men came into positions where they commanded men-of-war, they were equal to the occasion, although they had had no naval training. As time went on they acquired a naval training, so that in the later wars, in the early part of the nineteenth century, they met every requirement, and in the recent wars the graduates of the Naval academy have been equal to every duty which has been imposed upon them. They have made a record of which every American citizen should be proud.

The American sailorman has always been efficient. They were good men in the time of the Revolution; competent men in the time of the war of 1812. They are better men today than they were in those days, because today 95 per cent. of them are American citizens, and not a man is shipped in the American navy who has not declared his intention to become a citizen. Twenty five years ago not more than 30 per cent. of our men-of-war's men were American citizens.

The American navy has been successful because our ships have always been as good ships as any that were built in the world. Our merchantmen, in the Revolutionary times, and down to the Civil war, were the best merchant ships sailing the seas. They were, no doubt, the best manned, and they made the fastest time. During the period of wooden ships, when we built men-of-war they were of the same general character. Our men-of-war, gun for gun, were equal to, and probably superior, to those of any other nation.

We have always been able to shoot better than most people. Go back to the early times, to the revolutionary war. We lost 24 men-of-war, carrying less than 500 guns, in the Revolutionary war, while the British lost 102 men-of-war, carrying more than 2,500 guns. We captured 800 of their merchant ships, and it is not too much to say that if it had not been for the damage caused by the American navy we would not have won the Revolutionary war at all; that is, it might have been necessary later to have fought that war over again.

The same relative skill prevailed in the War of 1812. Our ships of the same class were superior to the ships of our opponents. This statement is confirmed when we study the exact figures. For instance, in the Hornet-Peacock contest the British ship lost five men killed and 37 wounded, out of a crew of 130, while the American ship had but three wounded—this in eleven minutes. In the Wasp-Frolic fight the British ship lost 15 men killed and 47 wounded, out of a crew of 110, while the American ship lost but five killed and five wounded from a crew of the same size.

I could mention a number of similar instances which demonstrate my statement that at that time we were able to shoot well, and we have been shooting better ever since. Not only the men of the north, but the men of the south, shot well during the Civil war; they shot well during the Spanish war; and we can shoot half a dozen times as well today as we could during the Spanish war.

Never has the American navy made such a record as it is making today, and never has there been a navy having a record excelling the one which our navy is now making for capacity to hit the target. That is really the whole war problem—to hit what you are shooting at.

We have not in the past built homogeneous fleets. We build a surplus of battleships and then provide the men to man them, and frequently provide more than we have ships for. We build auxiliaries and torpedo boats, if we do it at all, without any regard to the relation which such craft should bear to the battleship fleet, and while we have built or have in construction 29 battleships, we have practically no means of furnishing tenders for them under service conditions.

When the battleship fleet was sent to the Pacific recently it was necessary to charter 40 foreign ships to carry coal for it. If it had been found necessary to send the fleet around the horn in time of war it could not have been attempted, because we could not have furnished American vessels in which to carry the coal.

Very few people realize the deplorable condition we are in, as far as our merchant marine is concerned. If we had a large merchant marine we could draw from it without having special auxiliaries for the navy, but we are so lacking in both that it makes our present situation almost hopeless.

When the Spanish war broke out it was necessary to purchase colliers and transports. One hundred and two vessels were bought at a cost of something over $17,000,000, but they cost a very large percentage more than their market value, and more than twice as much as they could have been sold for if they had been put on the market at the termination of the war. In other words, we paid out millions of dollars because we had not provided ourselves with suitable auxiliaries for our battleship fleet. We should have a navy adequate for our needs; not only adequate in battleships, but adequate in every other respect.

Surgery on Heart

Surgical operations upon the heart have become more or less of a commonplace in medical history. Something approximating 100 cases of the sewing up of heart wounds are on record, and the recoveries have been considerable when one considers the highly dangerous character of such work. Hitherto, however, heart surgery has been limited to accident cases.

In a recent issue of the annals of surgery one of the workers at the Rockefeller institute for medical research discusses the possibility of treating diseased hearts surgically. He has made numerous experiments on animals and believes that such operations will be successfully performed on human beings in the near future. His tests have convinced him that the heart can be opened, scraped out (cleaned, so to speak), sewed up and started off on its "beating" path again without any great, at least insuperable, difficulty. By an ingenious system of side piping and new channeling he is able temporarily to cut out of the circulation portions of such important vessels as the descending aorta the largest artery in the body, without killing the animal. Among his suggested operations is one on the coronary arteries of the heart for the cure of angina pectoris.

This doctor has apparently proved to his own satisfaction on animals that successful surgical interference with the great vessels and the heart itself is a possibility. It is, of course, a long step from these experiments to actual operations on human beings, but there is every indication that the latter feat will be attempted in the near future. The intractability of cardiac affections and their high fatality make the proposed new surgery a thing of great general interest, and may justify the extreme boldness of the proposal.

PEOPLE TALKED ABOUT

RAILROAD HEAD RESIGNS

Marvin Hughitt, who has been president of the Chicago and Northwestern Railway company for nearly 24 years, has given up that position to accept the chairmanship of the board of directors. Mr. Hughitt, who is in his seventy-third year, is in many ways one of the most remarkable men in the railway service. There probably is no man in the railroad world today who is more widely known and yet about whom so little is known in detail as Mr. Hughitt. This is the result of a lifelong policy of doing things rather than of talking.

He was born in Genoa, Cayuga county, N. Y., in 1837, and began his career as a telegraph operator at Albany for the New York and Buffalo Telegraph company in 1852. In 1854 he located in Chicago and worked as an operator for the Illinois and Missouri Telegraph company. Mr. Hughitt entered the railway service in 1856, and until 1862 he was consecutively superintendent of telegraph and train master of the St. Louis, Alton and Chicago at Bloomington. From 1862 to 1864 he was superintendent of the southern division of the Illinois Central.

It was during the latter period that Mr. Hughitt performed an operating feat that has never been surpassed. The government suddenly called upon the road to move a large detachment of troops at a time when the road was flooded with traffic. The force became somewhat demoralized at the magnitude of the problem, whereupon Mr. Hughitt took his place at the dispatcher's key and performed the task without interruption to traffic, at the expense of 72 hours of continuous service. When he awakened two days later he found that he had been promoted to the position of general superintendent of the road.

In 1870 Mr. Hughitt left the service of the Illinois Central to become general manager of the St. Paul road, and a year later George M. Pullman induced him to become the manager of the Pullman company. Mr. Hughitt in 1872 accepted the position of general superintendent of the Northwestern railroad, after which his rise to the presidency was rapid and was marked by the constantly increasing importance of the system in the western railroad world.

One of the most remarkable things about the chairman of the Northwestern's board is the fact that at the age of seventy-three he is able to do and does a more strenuous day's work than most railway presidents who are 15 years younger. The fact that he came from sturdy stock, there being five living generations in the Hughitt family, with the fact also that he took the most perfect care of himself, accounts for his remarkable activity.

FRENCH REPUBLIC'S MASTER

The great railroad strike in France brought more than ever to the notice of the world a remarkable man. On the reassembling of the chamber of deputies Premier Briand created something of a sensation by declaring that he had proof, through confessions of the leaders of the recent railroad strike, that there was a deliberate plot to ruin France by violence, anarchy and civil war.

Briand, now prime minister and master of the French republic, was nobody ten years ago. At thirty-five he was an outsider, and, worse, seemingly a failure even as a lawyer. Suddenly he willed, and all came easy to him. Easy is the word that seems to characterize him now and then.

Born in St. Nazarine, he conquered a degree of law. Would he have been content to plead party wall cases, marry an $8,000 dot, play the violin, sing admirably, beat them all at billiards and talk politics? He was not of the ruling set of St. Nazaire. Possibly resentful, possible great-hearted, he certainly felt for the workingmen, who at once understood him and swore by him.

Buying a second-hand press in Paris, he took it from the freight office alone with a horse and wagon, and with one boy put it together, set the type and launched the Democracy of the West. Briand excited great animosity of the ruling classes, and so, for one reason or another, he got himself disbarred as a lawyer.

He quit St. Nazaire, his career apparently broken at the start, and began to write. Paris socialists were edified by the young stranger's grasp of their subjects. His articles in the Lanterne became at once noted for their clearness and boldness. They expressed the discontented workingman to himself—as if it were the workingman who wrote them.

He walked into the sovereign office of French deputy, first in 1902, again in 1906, and now, as simply, he has walked into the cabinet—and put himself at its head. No one realizes how he does it. All happens tranquilly, without fireworks. He steps through cruel difficulties without effort.

MISTRESS OF BIG MANSION

After nine years the most costly house in America has been finally completed, and presiding over it will be a petite young lady who has won her way to this queenly position through a courtship which once threatened to upset a section of Washington politics. The house is that of Senator W. A. Clark of Montana and New York, and is situated at the corner of Fifth avenue and Seventy-seventh street, Manhattan.

The house, when viewed from the exterior, appears rather heavy and massive for the space occupied, but, once within, one appreciates the real harmony of it all. Each of the nine stories is massed with every conceivable adjunct of comfort and luxury; from top to bottom is a store of storied wealth and mechanical device unsurpassed in the modern construction of house building. The bare structure alone cost $5,000,000.

And the copper king has reared this palace for one who not so many years ago was the daughter of a poor physician in Montana. At that time her name was Anna La Chappelle, and her father, dying penniless, commended her to the care of Senator Clark, urging his interest in her musical talent.

The senator sent his ward to the Boston Conservatory of music, where her progress was so marked as to cause him to send her to Paris, to perfect her studies. It was during this period, says Human Life, that the senator began to realize that his affection for his ward was of more than the fatherly order. While society was busy linking his name with that of nearly every eligible young lady, he became assured his ward's feelings were the same as his own, and asked her to become his wife.

RESEMBLES "FIGHTING BOB"

John C. Hartigan, BrBigadier-General of the Nebraska National Guard, frequently designated as the prototype of "Fighting Bob" Evans, is a conspicuous figure, particularly in the West at the present time. Forty years of age, a native of Missouri, he is described as a natural born fighter who never knows when he is beaten. From boyhood Hartigan was always "licking" somebody. After his school days were over he licked his opponents in two races for the mayoralty at Fairbury. In 1897 he went to the Philippines as a private soldier and came home a captain. He did some gallant work in active service, and on his return was successively promoted to his present position of honor and usefulness.

Hartigan is known as a knight of the mailed fist, and he is one-to-ten shot as a favorite son of Nebraska. The force and efficiency of his military career have been fully demonstrated to his admiring fellow citizens, and it has come about that Hartigan has overbalanced the popularity of that other illustrious Nebraskan, William Jennings Bryan. Westerners admire pluck, and it is said that Hartigan has lots of it.