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

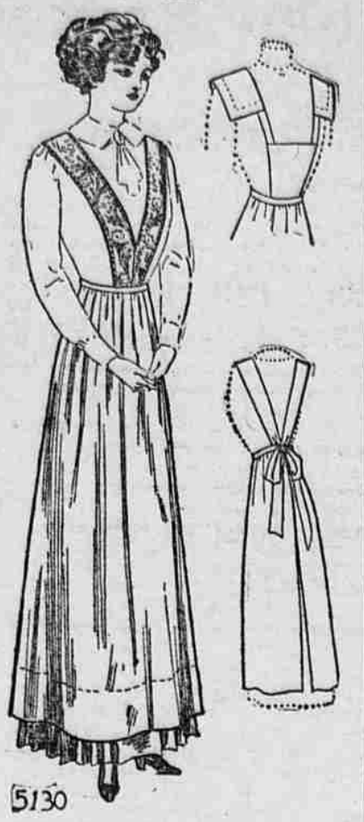
Surgical operations upon the heart have become more or less of a commonplace in medical history. Something approximating 100 cases of the sewing up of heart wounds are on record, and the recoveries have been considerable when one considers the highly dangerous character of such work. Hitherto, however,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

Practical Fashions

MAID'S OR NURSE'S APRON.



For a maid or nurse an apron which envelopes the figure and at the same time is dainty, is a necessity, and the model we picture is one of that style. The Apron is cut straight and is gathered to a belt, a deep hem finishes the lower edge. A bib and bretteles attached to straps over the shoulders complete the garment. If a more fancy apron is desired, the bib and bretelles may be omitted and insertion used for straps, as shown on the figure, this makes a very pretty finish.

The pattern (5180) is cut in one size. To make the apron will require 5⅝ yards of material 27 inches wide, or 4 yards 36 inches wide, 1⅞ yards of insertion.

To procure this pattern send 10 cents to "Pattern Department," of this paper. Write name and address plainly, and be sure to give size and number of pattern.

NO. 5180. SIZE.....
NAME.....
TOWN.....
STREET AND NO.....
STATE.....

CHILD'S COAT.

Providing designs for little ones is just as much a part of our business as the ones for older people, and the design we illustrate has had just as much careful thought. As a result we have a very attractive little garment. The fronts and back are each in one piece, and at the underarm seam a plaited section is inserted, which gives the required fulness. The front is double-breasted and closes up to the neck, an excellent feature for winter wear. A turn-over collar finishes the neck. The sleeves are the plain coat model finished with a turn-up cuff.

The pattern (5171) is cut in sizes 1 to 7 years. To make the coat in the medium size will require 2½ yards of material 27 inches wide, 2 yards 36 inches wide, or 1⅝ yards 44 inches wide.

To procure this pattern send 10 cents to "Pattern Department," of this paper. Write name and address plainly, and be sure to give size and number of pattern.

NO. 5171. SIZE.....
NAME.....
TOWN.....
STREET AND NO.....
STATE.....

Why They Smiled.

"What," asked counsel, "led you to suspect the prisoner?"

"Well, your honor, I met him two or three times in places where I'd be ashamed to be seen myself."

And he could not understand why the court smiled.

The Circus Parade.

The Camel—You refused that peanut from the vender on the curb?

The Elephant—Yes, I have been warned to beware of the gifts of the Greeks.

A conventional man is one whose action you can predict ahead of time.

Hence the Name.

In the service of a Baltimore family is an old negro cook known as Aunt Sally, and not the least of her achievement is the preparation of sea food.

In the kitchen one day Aunt Sally's nephew, a nine-year-old lad from a point where crabs are seldom seen, was watching in breathless interest the old lady's deviling of a dish of such crustaceans.

"Aunty," said he, after much reflection upon this mysterious point, "does debbil crabs come from de debbil?"

"No, chile," promptly responded Aunt Sally; "but dey is de debbil to make."

Lover's Wedding Cake.

Four pounds of our of love, half a pound of buttered youth, half a pound of good looks, half a pound of sweet temper, half a pound of self-forgetfulness, half a pound of powdered wits, half an ounce of dry humor, two tablespoonfuls of sweet argument, half a pint of rippling laughter, half a wineglassful of common sense.

Then put the flour of love, good looks and sweet temper into a well-furnished house. Beat the butter of youth to a cream. Mix together blindness of faults, self-forgetfulness, powdered wits, dry humor into sweet argument, then add them to the above. Pour in gently rippling laughter and common sense. Work it together until all is well mixed, then bake gently forever.