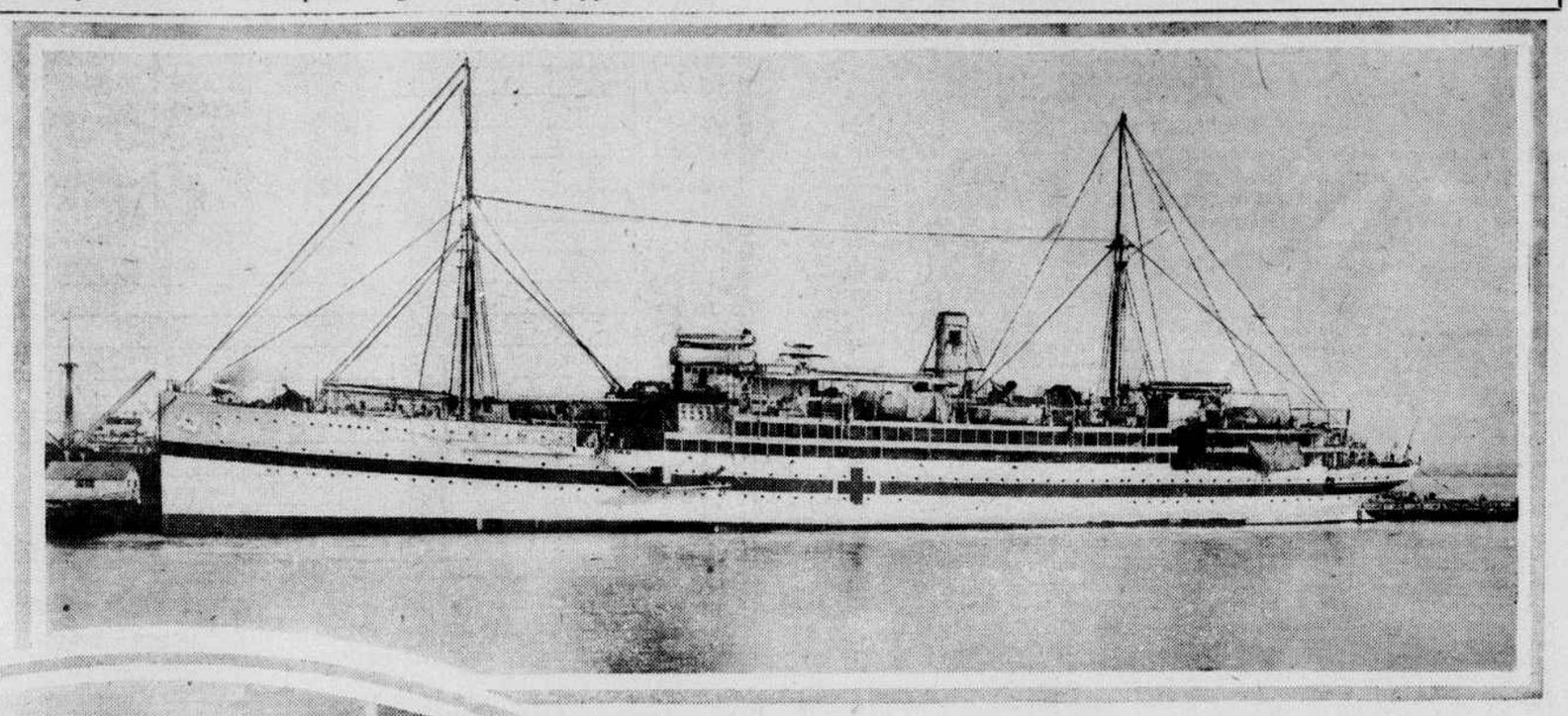
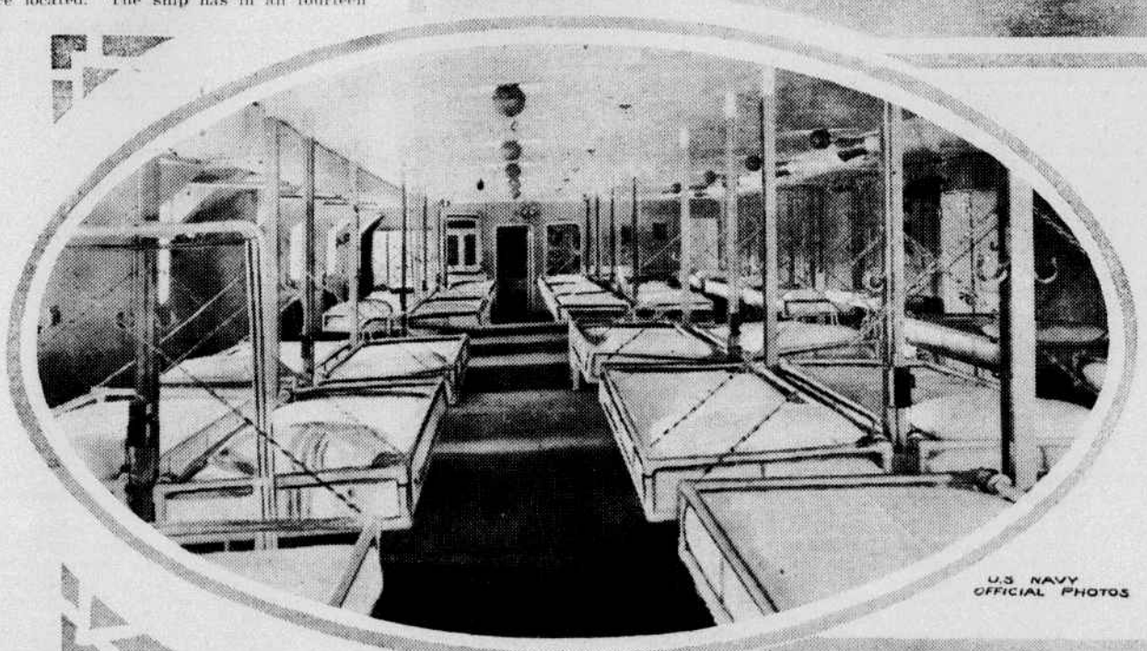
NAVY'S HOSPITAL SHIP BEST THAT MONEY CAN BUY

Expense Disregarded in Making the New U. S. S. Relief, Now With the Atlantic Fleet, Equal to Any Institution Ashore in Facilities, Comfort and Convenience

The U. S. S. Relief, the Navy's wonderful new hospital ship, recently commissioned and now with the fleet. Top picture is a broadside view of the craft. Below is one of the wards, showing some of the 500 comfortable swinging beds. A corner of the ship's pharmacy also shown—a complete drug store fully equipped. Photos U. S. Navy Official.





SURGICAL and medical care regardless of expense is provided by Uncle Sam for his nephews serving with the Atlantic fleet. The new hospital ship Relief has joined the fleet, and its equipment equals the best in any hospital ashore. In comfort and convenience the vessel is without a rival in any navy in the world, for it is the first of its type to be built for the purpose, all others in service having been adapted from craft designed for transports or for commerce.

New York Herald Bureau, Washington, D. C., March 12.

THE "sick bay" promises to become one of the most popular institutions in the navy when the accommodations and comforts of the new hospital ship Relief become thoroughly known to the bluejackets of the Atlantic fleet. The Relief joined Admiral Wilson's fleet when it returned to Guantanamo Bay from its joint manœuvres with the Pacific fleet off Panama.

The Relief is the first ship in the world to be built from the keel up solely for military hospital purposes. Though scores of so-called hospital ships were used during the world war—and the United States had her share of them—they were for the most part improvised from passenger steamers, and not a few of them were formerly freighters. Under such circumstances it was perhaps unavoidable that they should be lacking in many of the facilities that could be provided on a ship designed and built with the single idea of how best to accommodate sick or wounded sailors.

Affords the Same Facilities As the Best Hospitals Ashore

Equipped with every modern device for safety, comfort and care of her patients, with a bed capacity for approximately five hundred, the Relief incorporates in design and equipment all the appointments of a modern hospital ashore. This assures the navy personnel in the fleet, however far from home ports it may be, that in case of sickness or injury they can expect the same facilities for diagnosis and treatment that are accorded residents of any of the large American cities in municipal hospitals.

In addition to being prepared to care for the sick and injured among the thousands of officers and men of the fleet, the Relief is also fitted as a fleet medical supply depot so she may fill ships' requisitions for emergency medical supplies. She also has provision to carry in her hold a field hospital, with tentage, drugs, instruments, ranges, cots, ambulances, &c., so that at time of trouble, such as the Vera Cruz incident, she could place with a landing party on shore a field hospital ready for service, or at some catastrophe at a coast city, such as the Baltimore fire, the Galveston tidal wave or the San Francisco earthquake, she might contribute her mite of aid.

Second Hospital Ship of Her Name in the United States Navy

This is the second hospital ship of the name Relief in the American Navy. Her predecessor of the name served as a hospital ship with the army during the Spanish-American war, and later in the Philippine insurrection and Boxer uprising in China. At the time of the cruise of the battle fleet around the world she was placed in commission with the navy and accompanied the fleet as far as the Philippines, where she still remains. At present the navy has three other hospital ships, the Solace, Mercy and Comfort—all ships of honorable and efficient service during the world war, these ships having been converted from merchant ships for hospital purposes.

The peculiar appropriateness of the American system of naming naval vessels has been a matter of almost universal comment. While Great Britain struggles with such ponderous names as "Indefatigable," "Invincible," "Audacious" and "Insuperable" and seems constantly in danger of running out of superlative adjectives as her navy expands, the United States has followed the plan adopted some years ago of naming battleships after States of the Union, cruisers after cities of America and destroyers after naval officers and men who have at some time in their service distinguished themselves by conspicuous bravery.

During the world war a new class of names was developed in the "bird names" of the mine sweepers, examples of which are Finch, Quail, Pelican, Kingfisher, Heron, Swallow and Lapwing. In naming the new battle cruisers no particular rule seems to have been followed, probably because it was not expected that that class of vessels would become very numerous. The names chosen were Constellation, Constitution, Lexington, Ranger, Saratoga and the United States.

The only time, in recent years at least, that the United States Navy has resorted to the British practice of giving ships the name of an abstract quality is in the case of her hospital ships—the Mercy, Solace, Comfort and, now, the Relief.

In the year 1910 the General Board of the Navy recommended that a hospital ship be included in the building programme of the navy. It was not until 1916 that Congress appropriated the money to build one, however. The keel was laid in 1917, but on account of the war construction was suspended and the work begun again in 1919 was not completed until very recently. About the middle of the present month the Relief left the Navy Yard at Philadelphia and headed south to join the fleet.

Marking Precludes Any Mistake In Character of the Vessel

The Relief is a ship of 483 feet in length, about 10,000 tons displacement, twin screw, oil burning, and turbine propelled. Agreeable to the provisions of the Geneva Convention and the Hague Conference she is painted white with a wide green stripe from stem to stern. This green stripe is the uniform of a military hospital ship. Were she a Red Cross hospital ship, according to the provisions of these conventions, she would have a red band instead of the green band. Painted on the side of her hull and on the side of her stack is a large red cross. There are likewise on her upper works red crosses showing to the heavens for identification by hydroplane or airplane, so that her neutral mission cannot be mistaken, and, to establish her identify at night the red cross and other markings are provided with a means of illumination which should show up as unmistakably and as clearly as a sign along the Great White Way.

Boarding the Relief from a small boat one steps out upon a platform much larger than is encountered at the gangway of an ordinary ship, this platform being large and roomy to provide for handling stretchers. In the after part of the ship there is a specially designed apparatus for lifting patients from boats in a splint stretcher. This apparatus is constructed on the principle of the quadrant lifeboat davits, and they are located well aft where there will be the maximum lee in a seaway. From the gangway one steps immediately into the hospital division of the ship. Here the wards are located. The ship has in all fourteen wards and rooms for nineteen sick officer patients.

On both the port and starboard sides, at the gangway entrance, are located small operating rooms or dressing rooms, where the injured cases may be received and cleaned before being sent to the wards. Those hospital ships that served with the Gallipoli campaign found great need for rooms of this character. A shipload of patients had to be taken on board often in a sad condition, dirty from lying exposed one or more days and the wound often filled with fly larvae. The British employed more than forty hospital ships in this campaign, and some of them had a medical staff of forty or fifty surgeons.

Elevator Service for Each Group of Hospital Wards

The hospital wards and utilities are located in the comfortable midship space of the ship where there may be the least amount of pitch. There is a forward and after group with elevator service for each group. The second deck is the connecting passage, so that there is access by stretcher between the hospital departments without going into the weather. In this manner such special rooms as the X-ray room, operating rooms, hydrotherapeutic, dressing rooms, &c., are available from all parts of the ship. The typical ward consists of standees of berths which may be banked in two tiers or as single berths. All berths are detachable, so that a patient may be handled if necessary without taking him from the berth, and are accessible if necessary from both sides. These berths are wider than the usual ship berths. The ready adjustability of the berths is calculated to promote easy handling of the sick.

The heads of all patients are in the direction of shear, or the slant of the deck in the fore and aft direction, and this very necessary requirement of having all heads forward is taken advantage of in the arrangement of the lighting. Because the overhead decks of a ship, or ceilings, are low and because the sick lie on their backs looking upward, special care has to be taken to keep the light from shining in the patients' eyes. As all heads are directed forward it is only necessary to place the lights in such position that they will be over the fore and aft aisles and a little forward of the athwartship aisles, and then put a screen on the forward side of each light. This results in a light free from all those disturbances of shining directly into the eyes.

At each berth there is a portable comfort or utility light, which may be used by the patient for reading. This light may also be used for such purposes as examining the throat, doing a dressing, &c. The standing night lights are placed near the ward exits and placed low, well below the bed level, where they may light the floor only and not be a disturbing factor.

The wards are excellently equipped, both for natural and artificial ventilation. The air supplied the wards is first heated by thermo tanks and then forced into the ward spaces. Accessory to each of the wards are such rooms as baths and washrooms, linen rooms, pantries and "quiet rooms." The decks of the ship are wide and spacious and are provided with fittings to care for 100 or more swinging cots.

On the main deck near the gangway is the "out patient department." This is a group of rooms which, while located convenient to all wards by elevator, is likewise so located that patients sent from other ships for special examination or cooperative diagnosis or treatment and who will not remain aboard as patients may be cared for without invading the hospital proper. Each of the larger ships such as battleships has its own medical department splendidly equipped, but the medical officer often desires the assistance of consulting specialists, and in this "out patient" group are the X-ray and X-ray study rooms, the eye, ear, nose and throat rooms, the laboratory and dental department. All rooms are available for cooperative diagnosis, not only to the wards of the hospital ship but also to the wards or sick bays of the other ships of the fleet.

Ample Means Are Provided for Treatment of Contagious Cases

The after part of the ship is designed to care for contagious disease. As the ship rides to wind or breeze this division would be to the leeward. There are four small wards for these cases, each provided with adequate means for disinfection and prevention of the spread of contagion.

There are many special rooms. A splendidly planned operating room is two decks in height, with excellent natural and artificial lighting and ventilation and with such accessory rooms as etherizing room, scrubup room, sterilizing room, dressing room and lobby. These rooms are on the upper deck adjacent to the sick officers' quarters. Stopping on the next deck on a journey up the elevator, one passes the group of "out patient" department rooms, and passes to the next deck, where most of the "acute service wards" are located. Along this deck are such special rooms as the endoscopic room, two small operating rooms, an "acute treatment room" and the hydrotherapeutic and thermotherapeutic departments. On the main deck, well aft, are located such rooms as the embalming room, sterilizing room and incineration room.

For preparation of food there is a main galley and a special diet kitchen. The main galley prepares food for the well. The special diet kitchen is fitted with electric ranges and various other appliances for preparing the special diet for the sick. From this room the food is routed to the various ward pantries and to the bedside by means of portable cafeteria. By this method hot food for those sick in bed is assured. The cafeteria method is the most efficient manner of serving a large number of people with hot food quickly, in the opinion of medical officers, and as the patient in the ward cannot go to the cafeteria the cafeteria goes to him.

One interesting feature of the Relief's equipment is a mechanical cow, which provides milk for the sick. For years we have been familiar with partially dried or evaporated milk, known as condensed milk, or evaporated cream, which is often heavily sweetened by the addition of cane sugar. The milk made with the mechanical cow is a reconstructed milk and the process is simply one of taking ordinary milk apart and putting it together again, the parts when separated having very good keeping qualities.

Milk consists mostly of water, of butter fats, commonly known as cream, and a number of albuminous, saccharine and inorganic ingredients known collectively as milk solids. The cream is extracted in the form of unsalted butter. The water is extracted from the skimmed milk by any of the commercial processes, such as atomizing in a drying chamber and thus obtaining a skimmed milk powder.

When it is desired to reconstruct the milk unsalted butter and milk powder are brought together in a definite proportion of water, mixed and then put through an emulsifying process, which produces a palatable milk of any degree of cream richness desired. As something over four-fifths of milk consists of water, an idea may be obtained of the bulk eliminated by handling the product in this way.

As an evidence of the practicability of this process, when the city of Nitro, W. Va., grew up over night with a population of 25,000 inhabitants, no milk supply was available. By means of the mechanical cow, however, reconstructed milk was produced in sufficient quantities to supply the population with reconstructed milk, cream and a buttermilk called "nitrolac," the name being invented to avoid misapprehension in branding.

It is entirely possible to go a step further and by adding flavoring extract to the mixture in the mechanical cow to secure a product which needs only to be frozen to make ice cream. As the freezer is stationed alongside the mechanical cow the ice cream mixture can be poured from the one into the other, and the finished product is ready to be used as dessert.

Laundry Electrically Equipped And Linen Rooms Are Marvels

A spacious laundry, equipped with washers, extractors, tumbler driers, drying rooms, flat work ironers, finishing boards, universal presses, body ironers, collar ironers, &c., is connected by lift with the main access deck above and below, with linen stacks, the sorting room and linen repair room, in which are located the electric marking machine, electric sewing machines and other equipment for caring for the linen supplies of the hospital ship or other vessels.

To operate the ship there is provision for a crew of 400 officers and men. They are divided for purposes of organization into a deck, engineering, supply and medical department, each a coordinating and cooperating division. In addition to the men of the Hospital Corps, comprising the medical department for the care of the sick, there is detailed a group of trained women, members of the Navy Nurse Corps.

The ship is commanded by a medical officer of the navy, Commander R. C. Holcomb, M. C., U. S. N., who represented the Bureau of Medicine and Surgery in connection with the design and construction of the ship. The executive officer is Commander F. E. Porter, M. C., U. S. N. The master of the ship is Commander F. C. Seibert, United States Naval Reserve Force, who formerly served as master of the hospital ship Solace. The chief operating surgeon is Commander H. F. Strine, M. C., U. S. N., well known for his surgical accomplishments, and formerly a member of the National Board of Medical Examiners. The senior internist is Commander A. B. Clifford, M. C., U. S. N., an officer of wide medical and hospital experience. The eye, ear, nose and throat department is in charge of Commander G. B. Trible, M. C., U. S. N., an officer of established reputation in these specialties.

Working on Device to Prevent Rolling of Ship in Rough Seas

A stabilizing device guaranteed by its inventor to prevent ships from rolling even in the roughest sea is now under consideration by navy experts, and may eventually be installed on the Relief. This device, which is the work of Elmer E. Sperry, inventor of the gyroscopic compass, now in use on most naval vessels, also is based upon the principle of the gyroscope.

The Sperry stabilizer has been tried on several naval vessels of different types and there is said to be no question of its eventual success. In the case of instruments previously experimented with, however, there have been some defects of mechanical construction which it is hoped have been overcome in the latest model.

The idea of a device to prevent the rolling of ships is not a new one. As early as 1903 a German inventor named Schlick constructed a stabilizer which, according to naval experts here, had many good points, though it never became a commercial success. Mr. Sperry, however, is given credit for the first employment of the gyroscopic principle in offsetting the rolling of a ship.

In its simplest form the gyroscope is a wheel and axle so mounted as to permit the axle to take any position in space. If an effort is made to shift the axis of the wheel while it is spinning the wheel resists the effort, and the resistance results in a motion of the axis at right angles to the direction of the applied motion.

As a homelier illustration of the working principle of the Sperry stabilizer one may imagine a ship with a very tall mast, to the top of which a long rope is attached, with a giant on deck holding the end of the rope. When the ship begins to roll to one side the giant pulls the rope in the opposite direction, thus offsetting the roll and keeping the ship on an even keel.

In actual practice the stabilizer consists of one or more gyroscopes of a combined weight equal to one-half of one per cent. of the vessel's displacement. A small control gyroscope moves with the first wave, making an electric contact which sets in operation motors turning the big gyroscopes. These in turn function exactly the same as the small device, though with sufficient power to influence the motion of the ship.

While the navy is primarily interested in the stabilizer as a means of eliminating the roll in warships and thus improving gunfire, it has been pointed out that such a device would add much to the comfort of sick or wounded patients on a hospital ship, and it is thought likely that the Relief will be one of the first ships equipped with the stabilizer when it is finally adopted by the navy.

Tramp Printer Gone

"I TELL you, mates, the day will come when they'll set type by machine." Jim Laidlaw, tramp printer, made this statement more than fifty years ago while sticking type on a small sheet in the middle West. Jim had a penchant for prophecy, and few paid any attention to him. He even had the temerity to forecast that man would eventually conquer the air and fly like a bird.

It was the genius of Otto Mergenthaler that made good for Jim, revolutionized newspaper printing with the linotype machine and eliminated the "tourist" printer. While the Mergenthaler was by no means the first typesetting machine, it was the first successful substitute for hand composition.

The year of the World's Fair in Chicago, in 1893, saw the "lino" coming into general use and marked the beginning of the end of the old time "comp" and hand composition on newspapers.

Printers the country over looked upon the machine as a calamity and the ruination of their trade.

But while the typesetting machine proved itself the friend of both boss and men and a great benefit to the trade generally, it did sound the death knell of that picturesque species of the craft, variously known as "Tourist," "Knight of the Road," "Itinerant of the Stick and Rule" or "Tramp Printer."

Only a few years ago every newspaper composing room was a constant kaleidoscope of faces. A good printer in those days didn't care to hold a "frame" or "sit." He seldom stayed long in one place, much preferring the care free life of "subbing" to "holding cases" in any office.

The "tramp printer" roamed over the country from the lakes to the Gulf and from Maine to the Pacific coast, rarely riding in trains, much preferring to "hit the ties" on his journeys, where he had plenty of time for reflection. On reaching a town out of work and funds he usually made the public library his headquarters. Many of these men in this way picked up a wealth of knowledge that few printers of this day possess.

As a rule the "Knight of the Road" was generous to a fault. When a stranger "struck town" the first question asked him was: "Did you eat yet?" or "Have you got a room?" These courtesies were given and accepted without comment or thanks.

Indeed, these men were often knights in very truth. If they had their vices, they had their virtues, too, and generosity and good fellowship were not the least of them.