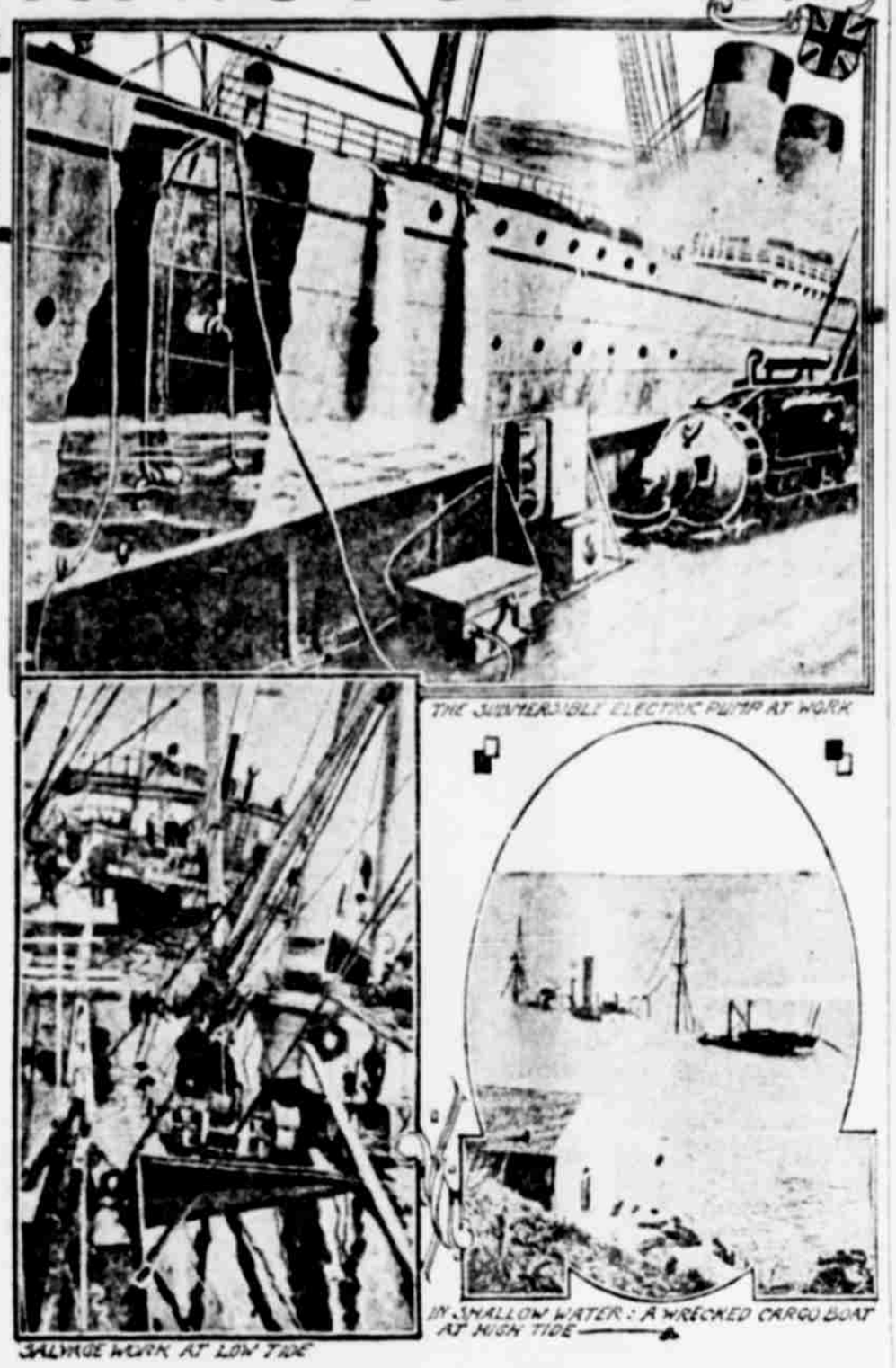
Salvage Lessens U-Boat Toll

Raising of Many Sunken Ships by England Helps to Defeat the German Submarine Campaign



BUILDING new ships to replace losses is not the only way to defeat the German submarine campaign. Saving ships that have been damaged, lifting those, even, that have been sunk, and restoring them to seagoing condition, are among the methods which have gradually been improved in England as the stringency of the shipping shortage became greater each month. The reason why the British authorities were not fully equipped to raise every ship that was sunk from the very start of the war is purely commercial. Saving ships costs money. Building new ones costs money. So long as the cost of salving was equal or even slightly in excess of the cost of building, so long it was not worth the while of owners to order salvage operations—just so long were invention and progress in the art of salvage delayed. When the salving of ships became urgent in the course of 1916 inventors of new appliances and new methods, salvage experts of many years standing, set their brains to work, and the result is that today ships can be raised and repaired from positions that two years ago would have been abandoned as hopeless.

As showing how need stimulates invention, I may instance a discovery in chemistry which has proved to be of the utmost value in salvage work, writes H. C. Fernsby in Country Life. It is obvious that when a ship, laden with grain, beef, or other perishable stuffs, gets water-logged with seawater, something very unpleasant is going to happen to her cargo. In point of fact, it turns into a miniature poison-gas factory. Grain produces sulphuretted hydrogen, and the salvage men who stumble on a pocket of that in a beached ship would be seized with violent sickness, would be partially blinded for some time, and would turn a dull leaden color in the face. Experiment brought an antidote to this trouble, and now the cargo of a ship that is to be salved can be sprayed with a special solution as soon as there is any reason to suspect poison gas. This spraying removes all danger.

Salvage work before the war was purely a private enterprise. The admiralty had no salvage branch, and when warships went ashore or were beached after collision the private firms, like the Liverpool Salvage association, were called in. War altered that, like many other things in the maritime world, and today the whole of the salvage work around the United Kingdom is carried out by an admiralty department. But since the men manning that department are, without exception, the former heads of the salvage business, the difference is mainly in titles and not in methods.

Warship salving is confidential, and the work done by the department in this direction cannot be described. Its share in keeping the allies supplied with merchant ships, however, is not secret, and the record of work done since October, 1915, is an excellent one. Down to the end of 1917 the admiralty salvage section, under the guidance of Capt. F. W. Young, had rescued 203 wrecked, mined or torpedoed ships and sent them in for repairs. All that time their experience was growing. New material was being built for the work, new ideas were being put into practical shape, and the result is that the year 1918 has so far seen a remarkable increase in the number of ships saved. The figures for the early part of this year are: January, 14; February, 41; March, 37; April, 36; May, 19; giving a total of 147. Thus in 32 months 407 ships have been restored to the world's mercantile tonnage. The Germans count all these and some of them twice over, in their calculations of the tonnage loss inflicted on the allies by the submarine campaign.

Every salvage man will tell you that the only thing certain about it is that you never know what is going to happen. A ship may be ashore in the simplest position, with just one big hole in her to be patched up, and it looks like a job that will take a few days. In the end you are, perhaps, six months hanging around with that one ship before you can get her to float. Weather, tides and the condition of the cargo all play a leading part in the work. The only thing the salvage man has got to do all the time is to be patient. That, perhaps, is why they all look so tired. Waiting is a weary business.

The weather is the worst enemy of salvage men. It is very nice on a fine summer's day to stand on the cliffs and look down at the busy humming workshops that we call salvage steamers clustered round a wreck that shines red with rust in the sunlight. The motors of the pumps drone incessantly, and the great 12-inch pipes send out cascades of gray water whose stale scent travels far before it is lost. The metal-helmeted divers clamber up and down, sitting for a while in the sun to make report of their progress below, receiving orders for the next stage, or just resting. It is different when the southwesterly gales blow, when rollers pour in from the Atlantic and pound down like Naasmyth hammers on the decks of the wreck. The salvage boats and tugs all have to run for shelter, work has to be abandoned, and only the still, silent hulk is left to weather the storm. So long as she is firmly imbedded in the sand or shingle, however, and there is plenty of water inside her as well as outside, it takes a good many months of storms to knock a ship to pieces. It is often necessary, in order to save a wreck from the effects of weather, to flood compartments in her that had remained watertight.

The problem of dealing with the water in wrecks and in ships that have been holed but are still afloat has been advanced very far toward solution during the war by the general adoption of a new British invention, which has been described as a miracle of modern electrical engineering. Described simply, it is an electrically driven pump which can be entirely submerged and will still pump as efficiently as if it were above water. The submersible pump, as it is called, does things that no one ever believed a pump could do. I saw one in the hold of a wreck recently, covered with a black, evil-smelling ooze, looking for all the world like a bit of wreckage itself. But it had just finished a long bout of pumping under water in that hold which was filled with floating barrels, beams, tangled ironwork and a sludge that was indescribable; and when it had been put over the side and had pumped a few tons of clean sea water through itself, that pump was ready to start work again anywhere.

The secret of the pump is that it is not watertight—which sounds absurd. It is, however, perfectly true that the water can flow in and around the whole of the works of the pump while it is at work. No one has ever hitherto succeeded in making electricity work under water in this way; but the uses of the discovery are plain even to the layman. A ship fitted with these pumps, for example, ought never to sink, if she has enough of them on board, because they can be set to work in the flooded compartments and pump the water out as fast as it comes in. Damage to the engine rooms does not affect the pumps, because they do not rely for their current on the ship's dynamos, but on their own portable outfit.

Salvage experts tell one rather amusing tale of the versatility of the pumps. A fire broke out in the hold of a ship that was carrying a very valuable inflammable cargo. Two submersible pumps were on board, and the captain slung them over the side into the sea, attached a good length of hose to them and set them going to pump water at the rate of about 350 tons an hour each into the burning hold. They soon put the fire out, and the captain then lowered the pumps into the hold and made them pump out the water they had previously pumped in.

Fire at sea, collision, weather and other marine risks are all dealt with by the admiralty salvage section just as much as war risks such as mining and torpedoing; but it is, of course, the war risks that provide the bulk of the cases. The work of the section falls really into three parts.

There are, first of all, the rescue tugs. These proceed to any ship that is in distress, whatever the cause, and endeavor to tow her into port, or at least to get her into shallow water, where she can go aground or even sink and still be salvable. In the latter case the second part of the section's work begins—the patching up, emptying and lifting. This may take anything from six weeks to six months. When she is lifted and afloat again she is towed to the nearest sheltered anchorage and there temporary repairs are effected, she is cleaned up inside and her engine-room restored to something like order. It is the aim, as far as possible, to enable her to proceed to a shipyard under her own steam. There are cases, of course, where the torpedo or the mine has exploded just by the engine-room and blown everything to fragments. Then the hull, patched up, has to be towed to the repairing yard; but in the majority of cases the damage is in the bows or in the stern, and the vessel can limp along by herself after first aid from the salvage section.

British salvage experts have little hope of salving many of the ships that are down in deep water. The physical limitations of divers alone would make it an impossibility to raise, for example, the Lusitania, and, so far, no mechanical devices that have been suggested or made hold out any hope of doing the work of the diver with any success.

INTRICATE WEAPON

Back of the torpedo is its fish-shaped body, containing all the machinery to drive and steer after it has been launched. From forward aft we find compartments as follows: A compressed air reservoir, an immersion or balance chamber, engine space and a buoyancy chamber. The tiny engine is driven by compressed air, which is compressed to a high degree, and it rotates the propellers whereby the projectile is carried through the water. The immersion or balance chamber provides the means of maintaining the depth at which the torpedo shall travel through the water after being launched. In the engine chamber there is also the device for keeping the projectile to its designated path during its travel. This is achieved by means of a gyroscope. The buoyancy chamber, which is placed aft of the engine chamber, is virtually a vacuum. Without this chamber the torpedo would sink. The propellers and rudders are astern and outside the torpedo's body.

WONDERFUL RESEMBLANCE.

Dion Boucicault, the actor-dramatist, was the very image of Sir Kenelm Digby, the seventeenth-century philosopher. Douglas Jerrold and Montgolfier, the inventor of balloons, might have passed as twin brothers. Montagu Williams had only to don a black periwig to become a perfect double of Charles II as depicted by Sir Peter Lely. The likeness between Byron and J. L. Motley, the historian of the Dutch republic, was described by the poet's widow as "most wonderful."

Charles MacFarlane in his "Reminiscences of a Literary Life," describes how, in 1820, he met Shelley in the Royal Burbon museum, Naples, and showed him a statue of Agrippina, the mother of Nero. "I told him that the Bonaparte family considered this the very image of their mother. When Madame Mere was in Naples, her daughter, Queen Caroline, induced her to sit by the statue, and many a large party remark on the striking resemblance."

GREAT PLAY NEVER PRODUCED.

Gen. Lew Wallace wrote a tragedy entitled "Commodus," which was founded on the story of Maternus, an escaped slave, who rebelled against his country, placed himself at the head of a band of outlaws, planned the capture of Rome and his own elevation to the throne, but was finally betrayed and killed. It was never produced, but Lawrence Barrett, to whom it was submitted, wrote General Wallace that it was the best play since "Richelieu," and that "both as a poem and as an acting play 'Commodus' is the best English drama." It was printed, but never staged.—Boston Globe.

UP, SEE, UP.

"It's just dawned on me why those trapeze performers are sech funny fellers," said the manager of the op'ry house.

"Wall, why is it, ole Smart Alec," asked the sher'f of the tnoun.

"Why, cause the dern cusses is allers actin' up."

FAIR TREATMENT.

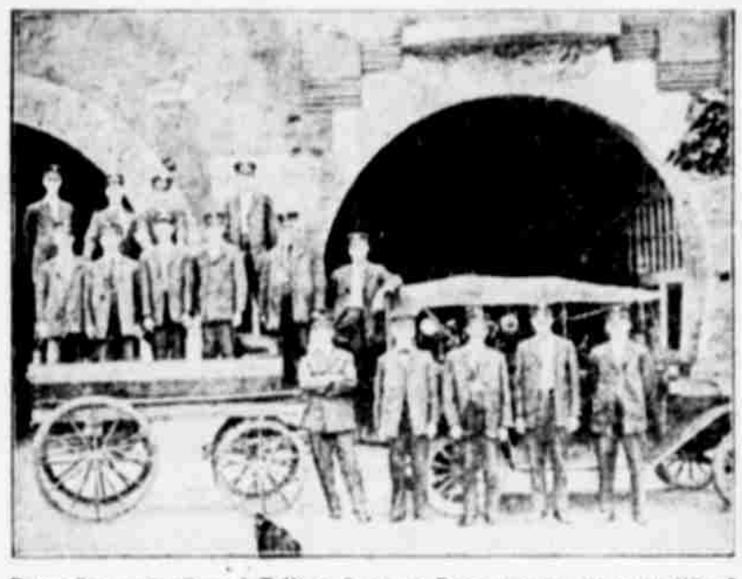
A beautiful young lady approached the ticket window, and in a voice like the rippling of a brook asked the clerk: "What is the fare to the fair?"

To which the clerk replied: "Same as to the homely, madam."

Our Part in Feeding the Nation

(Special Information Service, United States Department of Agriculture.)

CITY FOLKS HELP HARVEST CROPS.



These Firemen's "Days Off" Were Spent on Farms Helping With the Wheat Harvest.

TO SOLVE FARM LABOR PROBLEM

Men and Women From Towns and Cities Go Into Country to Assist Farmers.

LARGEST ACREAGE OF CROPS

How States Have Enlisted and Organized Labor for Farms to Save Season's Food Harvest—"Shock Troops" Assist.

The co-operation of people of villages, towns and cities in harvesting the farm crops demonstrates in a most forcible way the patriotism of the American people and the active way in which they are supporting the program of the government.

Farmers planted this year the largest acreage of crops in the history of our agriculture. Everywhere the farmers have responded to the call from the government for greater food production and are doing everything within their power to give to the country the large supply that is so greatly needed.

While crop production has been increased, the farmers have been confronted with labor difficulties in many sections of the Union, and have had to cope with the difficulty of cultivating and harvesting an increased acreage of crops with a reduced amount of regular labor to do the work.

In order that this question might be clearly placed before the people of the villages, towns and cities of the various states, arrangements were made by the department of agriculture, in co-operation with state councils of defense, the agricultural colleges and the U. S. department of labor and state departments of labor, to hold meetings with chambers of commerce, business men's associations, rotary clubs, and other organizations of the cities and towns, placing before them the need for agricultural labor and urging action which will give adequate assistance. Everywhere the response has been large and gratifying. The result of this campaign is that many thousands of workers have been enrolled and have done much to meet the emergency. There is reasonable assurance that, in spite of difficulties, all the crops will be normally harvested.

Business Men Save Potatoes.

The potato crop of Houston and Wharton counties, Texas, has been saved through the aid of the business men in local towns. When it was realized that the potato crop would be lost unless the farmers received help, the state extension director, co-operating with the farm help specialist of the department of agriculture, explained the situation and the business men closed their offices, stores and banks, went to the farms and worked with the potato growers in harvesting the crop.

More than nine and one-half million acres of wheat were harvested in Kansas. Hundreds of towns organized their forces and closed their stores, offices, and other places of business during the day, that the workers might go to the fields and help save this food crop.

The mayor and board of public works of one of the large middle western cities closed their offices and worked in the wheat fields. The mayor drove the binder while the other men shocked the grain. On a farm adjoining a Catholic institution in Indiana 145 priests were found assisting in the harvest of the alfalfa and clover hay and the wheat and oats.

"Shock troops" have been organized to assist the farmers in harvesting their wheat. These so-called "shock troops" consist of business men, clerks and laborers who volunteer to assist in this way. These men perform their regular work in town during the day and at 5 o'clock are taken in automobiles to the country, where they assist the farmers. In this way the regular business is carried on and at the same time these men go into the fields during the cool part of the day, when they can render the greatest service. In one evening alone 40 men were able to shock more than 80 acres of wheat.

Women Cook for Hands.

In Indiana 24 towns secured an enrollment of 8,000 workers to assist in the harvest of the wheat and oats crop. Kansas City, as a result of a campaign during the week of June 3 to 8, enlisted 10,000 workers to assist Kansas farmers. These workers not only offered their services, but under the direction of the athletic club and the chamber of commerce took a course of training which fitted them and hardened them for the savage work they would be called upon to do on the farms. In addition to enrolling men, women were enlisted from the towns and cities to go to the country to assist the farmers' wives in cooking and caring for the large army of harvest hands. Forty thousand city people assisted Kansas farmers in handling the wheat.

In the berry district south of Portland, Ore., a large amount of help is needed to harvest the crop. The farm help specialist in Portland enlisted the services of 1,000 women and girls, who were organized into units and taken to the district, where they are now working and aiding in harvesting the crop in a satisfactory way.

Emergency Labor Organization.

The farm labor administration of the Illinois state council of defense, in co-operation with workers furnished by the U. S. department of agriculture, has perfected an emergency farm labor organization in practically every county of the state. Reports from 60 counties show more than 50,000 workers registered to assist in the harvest.

In the sugar-beet districts of southern Michigan, Colorado and Utah many thousands of workers have been secured to cultivate this crop and thus insure a large supply of sugar.

In a similar way the other states have organized and enlisted labor for the farms and thus meet in a most admirable way the emergency needs.

TOWNFOLK MUST HELP

Though townspeople have already done much in aiding farmers to harvest their crops and to do other necessary work, there is still much to be done this fall if all the crops raised by American farmers are to be saved to supply food and clothing to soldiers and war workers. Harvesting of cotton, cane, rice, late sweet potatoes, and other crops in the South, and corn, late Irish potatoes, fruit and other crops in the North, is yet to be done and will require the co-operation of men, women, boys and girls from cities and towns to help in the fields and orchards. Through the active efforts of many city and town organizations in securing necessary help for farmers, the labor problem has been successfully solved in many communities, but there is even greater need for emergency farm hands in the future. With organizations well started, with a better understanding on the part of urban people as to their responsibilities, with public sentiment favoring the "work or fight" idea, with the classification of non-essential industries, with anti-loafing laws in many states forcing able-bodied idlers into productive work, with women doing much of the work previously done by men, with boys effectively organized and volunteering in large numbers to help farmers, farm labor problems, according to the U. S. department of agriculture, are being solved in nearly every part of the United States.

For cabbage worms: Mix one part of fresh Persian insect powder with four parts of air-slaked lime, and dust it on the plants at regular intervals.