

### The Raising of the "Utopia."



ON the black and stormy night of March 17, 1891, Her Majesty's armour-clad warship *Anson* came into collision with the Anchor liner *Utopia* in the Bay of Gibraltar, the latter vessel passing too close to the warship's bows, and receiving her ram almost amidships. The horrible sights and sounds of that night have already been the matter of many newspaper reports, and our present business is to show how the fabric of the sunken vessel was recovered. Suffice it, then, to say that nearly one thousand persons, including many Italian emigrants, were on the *Utopia* at the time of the disaster, and that of these some six hundred met their deaths. The remainder owed their rescue to the prompt devotion of the crews of the ships of the Mediterranean squadron fortunately near.

The *Utopia* was struck rather aft of amidships, and consequently sank stern first. Our illustration is from a sketch by an eyewitness. In the position shown she remained for a very few minutes after the collision, and then sank entirely with her six hundred.

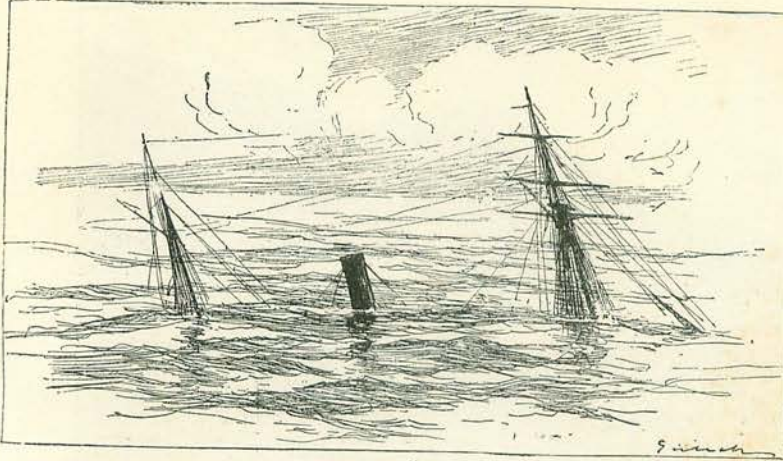
The morning of the next day broke on a serene calm, and the masts and funnel of the *Utopia* were all to be seen of that vessel above the water of the Bay of Gibraltar.

Divers descended, and the greater number of the dead bodies were recovered and buried ashore. It was then discovered that the ship lay in full 56 ft. of water at stern and

in 43 ft. at bows, and the problem of raising her began to be considered. Many schemes and suggestions were submitted to the owners, and a famous Continental salvage company offered to undertake the work—the remainder of the year to be occupied in preparations, and the wreck to be raised in 1892, no guarantee, at any rate, being given that the business would be completed before. Ultimately the matter was placed in the hands of Mr. Thomas Napier Armit, manager of the East Coast Salvage Company, of Leith, a salvage engineer with a reputation at the time second to none, and now considerably enhanced by his perfect success in this case. Mr. Armit performed the entire business in two months.

Here was his plan; not a wholly original plan, be it understood; nevertheless a plan first successfully applied by Mr. Armit in 1875 in the Bay of Panama, and subsequently used in the case of the Orient steamer *Austral*, which sank in Sydney harbour; moreover, a plan much modified and improved in many important particulars for this particular case; so much modified and improved, in fact, as to become a new departure in wreck-raising.

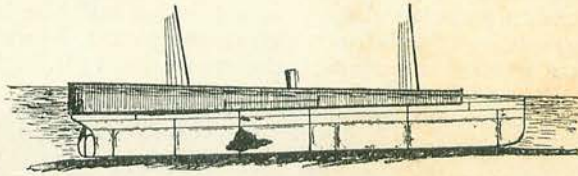
A great superstructure was erected upon the hull of the sunken ship, in a manner clearly shown in the accompanying sketches. Practically speaking, a false bulwark was built above the bulwarks of the ship, so high as to rise above the surface of the water. This, of course, had to be strongly and scientifically stayed, to resist the sea



THE SUNKEN "UTOPIA."

currents and the wind. The broadside view gives an idea of this superstructure seen sideways (as well as of the position of the hole made by the *Anson*), and the section clearly explains the system of internal struts and shores. The method of attaching this superstructure was new, simple, quick, and ingenious, rendering unnecessary all boring and drilling by the divers. In the case of the *Austral*, boring and drilling was avoided by taking advantage of the side-light holes to fix the first of the raising framework. This, however, was a far more laborious and clumsy expedient than that here adopted, in which the gunwale logs, as the foundation timbers of the superstructure were called, having been lowered into position, were *clamped* to the vessel's bulwarks with just such clamps—much larger and stouter, of course—as are used by joiners. Thus a little screwing-up was all the work necessary for the divers in fixing the gunwale logs.

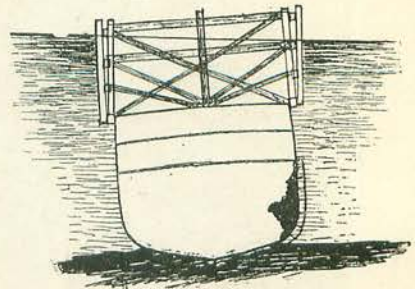
The superstructure itself had been planned and prepared by Mr. Armit, at Glasgow, in ten days, and this without a sight of the wreck, and entirely upon telegraphic information. The strain imposed upon this superstructure during its erection by the various sea-currents and the strong south-westerly winds setting directly into the Bay, may readily be imagined. It is sufficiently wonderful that such strains should be resisted by the completed fabric, but that they should do no damage to it while



BROADSIDE.

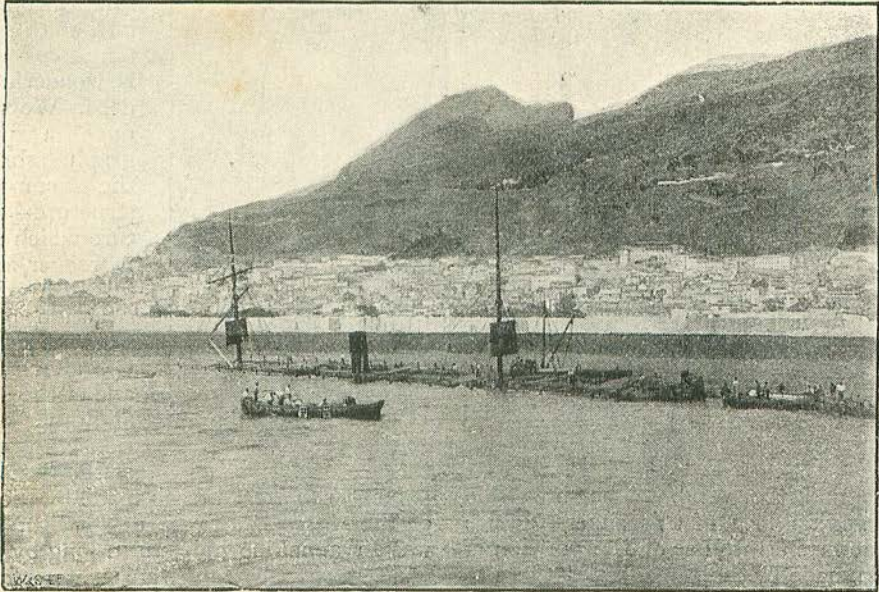
Next, the great breach made by the ram of the *Anson* had to be dealt with. This was an appalling hole, 26 ft. long by 15 ft. wide, torn through iron plates, frames, parts of the engines, and a transverse iron bulkhead—and all without the slightest damage to the ram which caused it! Truly a great illustration of the power of the ram, that old weapon of our fathers, the Vikings, now made modern.

The lower edge of this great breach was in 52 ft. of water, and the divers set to work to cover up the hole with oak planks secured with screw bolts. This they did so efficiently that the patch was not only perfectly watertight for the remainder of the time spent in the operations, but was left without docking or any further attention during the voyage to the Clyde shipbuilding



SECTION.

yard! The divers who accomplished this feat were Messrs. Stirrat and Templeton.

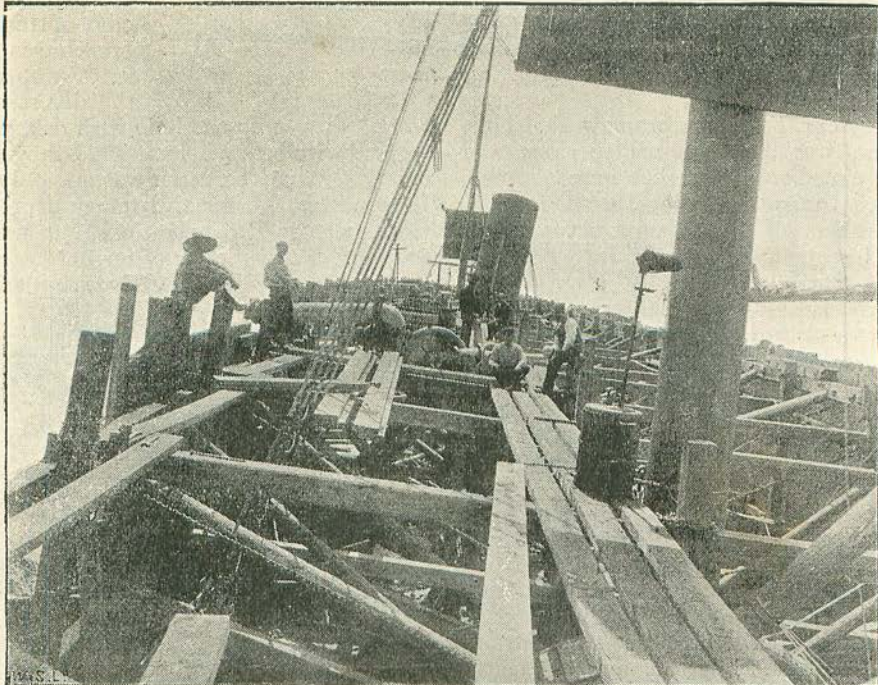


THE "UTOPIA," WITH SUPERSTRUCTURE COMPLETE.

The sides of the great superstructure, it must be understood, were covered with vertical oak planks 6 in. thick. These were now covered with canvas to prevent leakage, and the actual raising was ready to begin.

Now, consider the position of affairs.

Here was the vessel, sunk, in the lowest part, in nearly 57 ft. of water and with a slight list (of twenty degrees) to one side. The breach in her hull had been stopped, and a great temporary bulwark, 24 ft. high at the stern and 13 ft. high at the bow, had



ON THE SUPERSTRUCTURE; VESSEL RISING.

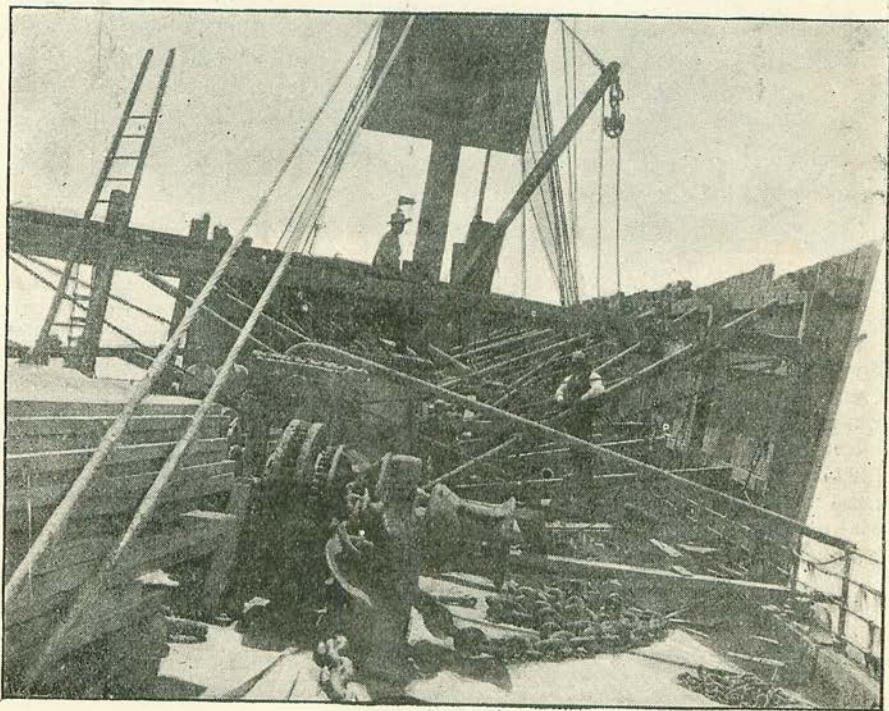
been erected upon her, thus making the hull so much higher, and bringing the level of the scaffolding and false deck above the water. Upon this superstructure pumps were erected, capable of pumping 70 tons a minute.

All being ready, the pumps were set to work, pumping the water out of the area enclosed by the ship and its superstructure and casting it over into the sea. This was begun at seven in the morning of July 8, and the pumps had been going fully an hour before any movement was observable. The morning was a fine one, and the bay was

became visible from the scaffolding, the ship was slowly towed in toward the shore. A view of some parts of the superstructure at about this time is represented in the photograph reproduced.

At eleven o'clock a strong wind sprang up, and pumping had to be suspended for a while. It was resumed, however, and by the end of the day the *Utopia* had been raised from a depth of 57 ft. of water to one of 38 ft. only.

After this the superstructure (which was 310 ft. long) was taken down, and the pumps were transferred to the deck. A



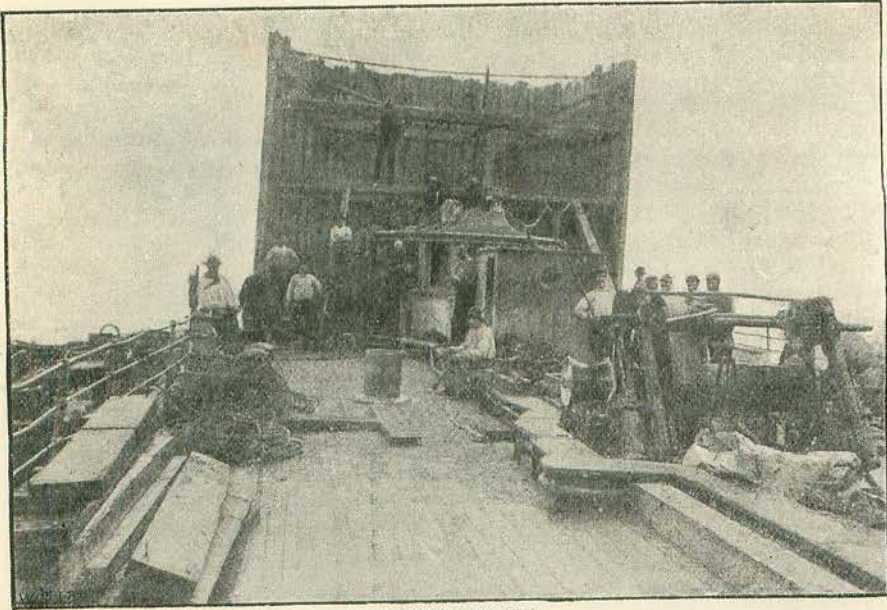
VIEW OF DECK.

crowded by all sorts of craft filled with sightseers, crowds of whom also occupied every available view-point on shore. When, soon after eight o'clock, it was seen that the vessel had righted from her list, and that her masts were upright once more, much enthusiasm was manifested. Then after some 3,500 tons displacement had been effected by the pumps, the ship, with its great superstructure, slowly began to rise.

The stern lifted first, and, by ten o'clock was 9 ft. above the water. Then the bows began to rise, being slowly dragged from the soft bottom in which they were imbedded. Now, as the water left the interior, and, with the rise of the vessel, the decks

photograph, which we reproduce, well represents a scene on the deck at this stage of the operations, a winch and cable-chain clogged with weed and rust, and the temporary structure in course of taking down.

With the pumps on the deck then, the *Utopia* was entirely pumped out, and was towed into shallow water and beached on a suitable shoal for clearing out. The decks, and such of the inside of the vessel as was visible from them, presented an extraordinary and weird spectacle. It was at first impossible to descend into the lower parts, where lay many dead bodies, on account of the deadly gas generated by these and the decomposed cargo. To get rid of this,



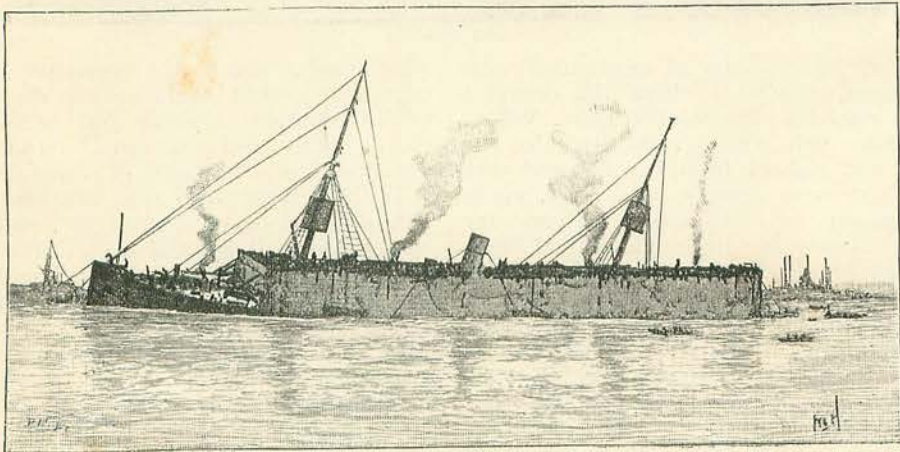
THE STERN BUILDING.

water was again admitted, and the interior thoroughly flushed out. Then the dead bodies and the putrid cargo were removed—a dangerous as well as an unutterably repulsive task. Thirty-three bodies in all were found below, presenting many sights too hideous for description. These were buried in the middle of the Straits.

The last piece of the superstructure taken down was that about the stern, the highest and strongest built of the whole erection. A photograph representing this portion just before removal gives a good idea of the general construction of this great caisson—for that is what it practically was. The

upright timbers were half-checked oak planks, and were seven inches thick—as against the six inches employed on the rest of the construction. They were joined by horizontal angle-iron framings shaped to the vessel's stern. The foot of the planking was stepped into a gutter way of double angle-irons, shaped to the taffrail. From the height of this planking the eye may judge the depth below the surface to which the deck sank.

So was raised the *Utopia*—a wreck recovered probably in the shortest time and with the least expense on record for a vessel of her size.



TOWING THE WRECK INSHORE.