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SUBMARINE FISHING BOAT TO KEEP UP SEA FOOD SUPPLY

Simon Lake's Latest Device Can Tap Unlimited Beds of Oysters and Clams and Salvage Wrecks

AT more fish," is the latest | damental feature of his present appaadvice of the United States ratus.

bullion supposed to be still buried in the wreck of the British frigate La

Lutine at the entrance to the Zuyder

Zee. He set about designing a special

vessel with a salvage tube which

would make it possible to engage in

though the sea was rough and the

water too shallow for the safety of the

types of surface craft ordinarily em-

by means of a flexible mooring.

of a small steam trawler and the dem-

onstrations confirmed the general cor-

Shortly after this the right to oper-

subaqueous recovery work

ployed in kindred undertaking.

When in Europe in 1905 and 1906 Food Administration; let the rivers, lakes and oceans supply building submarines for the Russian any deficit in the way of meat or farm building submarines for the Russian ested in submarine salvage and planned to recover the gold and silver

products. This is all very well, but how is it to be done? Is it possible to get more food from the sea than heretofore? limon Lake, inventor and consulting engineer, answers that it is possible. and he has set about proving his contention in a practical way. As he puts it:

"The sea can be made to yield us millions of tons of nourishing food which we now neglect. Our coastal waters can do a tremendous service for us in keeping down the cost of living. Fish, bivalves, molluscs, &c., are there to be had in abundance if we will go about harvesting them in an efficient and up to date fashion. But to achieve these ends we must employ novel apparatus."

A little more than a week ago Mr. Lake launched at Bridgeport, Conn., a couple of unusual vessels designed to work cooperatively. One of the boats he named the Argosy and the other he dubbed Argonaut 111.

The Argosy is outwardly much like a large houseboat, having a length of 100 feet, a beam of 20 feet and drawing something less than four feet of The Argonaut III., on the water. other hand, suggests a fitney submarine because of its modest size, and underwater boat that will be linked with the Argosy by means of a steel tube about 150 feet long.

The tube is of sufficient diameter to provide a passageway for workers going down from the surface vessel or mounting from the submerged submarine to the Argosy. In other words, the Argosy will play the part of a sea-going navigable base for the Argonaut III. when the latter is trailing along upon the surface or when it is crawling upon the waterbed for purposes of exploration, for salvage, for fishin or for dredging. The whole equipment

is the outcome of Mr. Lake's subaquatic experience, starting with his submarine, the Argonaut, built in Bal-timore in 1897.

A Boat on Wheels.

The original Argonaut differed radically from other types of submarines nasmuch as it was not designed to travel submerged between the surface and the bottom, but was intended to navigate either upon the waves or on the waterbed by means of largo wheels. It was only thirty-six feet was tested in English waters by means long and its greatest circular cross section had a diameter of nine feet. The boat was driven at the surface rectness of the invention. and submerged by a modest 30 horsepower gasolene engine, and air for the motor and the crew when under water was obtained through a pipe

reaching to the surface. Small as the craft was it was able rines. His struggle to obtain conmiles in Chesapeake Bay and on it has been only within the last year | bed. the Atlantic coast, travelling both on the surface and submerged and runor so that he has been able to return ning over both hard and soft botpeaceful aspects. toms. A characteristic feature of the

vessel was a diving compartment. The diving compartment was virtu-

suitable to balance that of the outly-ing water at the working depth and often destructive, because the under water it illumined by subaqueous searchlights ery of sunken cargo and the reclaim-ing water at the working depth and often destructive, because the boat was at a shallow and guide the submarine to a nicety, ing of coal from foundered barges in opened hatch.

LARGE LAKE SUBMARINE SALVAGE OUTFIT PUMPING UP THE UPPER END OF A LAKE SUBMARINE SALVAGE TUBE, ALONGSIDE AN ATTENDANT SURFACE CRAFT. was then that he evolved the idea of a to a nicety by the men in the sub-submergible diving chamber attached mergible chamber. Therefore he has marines have learned that there is a to a tubular passageway held at its elected to substitute a small subma- deal of difference between the theoupper end to a surface power vessel rine for his earlier working chamber retical and the actual underwater efrigidly attached to the Brightlingsea fects of ocean waves. While the bli-By way of preparation for the re-covery of La Lutine's treasure Mr. the connecting tubular passageway in than 15 or 20 feet at the most their Lake built in 1907-08 at Brightlingsea, a manner that permits of considerable subaqueous reflexes reach down nearly England, a salvage tube having the flexibility of movement on the part of 100 feet, particularly when the coast desired features and fitted with power-ful electrically operated pumps for the itself, as well as in the case of the down motion of a submerged sub-

purpose of dredging away the sand surface power plant, the houseboat marine that is technically termed that covered the old wreck. The tube Argosy. ommanders and the skippers of British underwater craft have found it dis-The Argonaut III, is fitted with bot- tressing to be driven to the sea bed to com wheels hung on hinges or arms, rest in relatively shallow waters while and these in their turn are functioned a storm is raging above.

ate upon La Lutine expired and Mr. by pistons which play the part of The pounding upon even a sandy Lake was called back to the United springs or buffers in cushioning the bottom jars the craft so that sleep is States to begin his fight for recogni-tion as a builder of military subma-wheels in travelling upon the ocean the fear that the recurrent blows may rines. His struggle to obtain con-tracts for under water boats for the vertical movement of the sea which for all hands. The balanced yokes in to accommodate a crew of five men; and in 1898 the boat cruised over in the field of submarine salvage, and submarine violently back upon the sea wheels are hung safeguard the boat against this pumping and therefore Fourteen years ago a naval expert will make it possible to carry on operato subaqueous engineering in its laughed at Mr. Lake when he said that tions near shore and under conditions the ground swell set up by a storm in- that would otherwise be prohibitive.

The experiments made with the duced a disturbance at a depth of forty The Argonaut III. is to be capable Brightlingsea tube furnished Mr. Lake feet or more. He referred Mr. Lake of self-propulsion, and to that end is it is advisable to hark back to 1996, with a wrecking pump, and, by way and the ordinary dredge or drag out-valuable data, and his present equip- a classical work on the theory of waves to be equipped with electrical motors after the original Argonaut was cut of consort. Mr. Lake built a sub- fits. These beds were not planted by when the boat was under water and permit a diver to pass down and out rangement developed difficulties and it that Mr Lake's gauges must have been to the submarine. In this way the about that time Mr. Lake decided to could be forced into the freighter at Even where the planted beds of oys-

hood of the Bridgeport Lighthouse, the cyster beds. In this fashion not and the Argonaut took up the search under water and in something like two a certainty. What followed has been thus described by Mr. Lake:

thus described by Mr. Lake: "She then towed the submersible freight boat out, sank it alongside the overcome, because the vessel can falwreck, and in seven minutes after re- low the contours of the bottom and moving the hatch cover and getting garner the bivalves like a motor pethe suction and discharge pipes of her tato digger. For this purpose it is to pumping apparatus arranged trans- have centrifugal pumps that will draw ferred from the wreck to the sub-inersible freight boat more than eight tons of coal. The hatch was then freight holds or compartments. It is closed and the water forced out by the entirely practicable to sather from admission of compressed air, and in thriving beds oysters and clams at the freight rate of 5,000 bushels an hour, and to So much for the past performances which have served as stepping stones to the present evolution of Mr. Lake's subaqueous salvage and solver. Lake's

subaqueous salvage and fishing plant. During his travels on the sea bed with the original Argonaut in deep cial application along simplewaters Mr. Lake discovered vast beds the harvesting of scallops and were beyond the reach of the tongers

There is another possible come of oysters and hard clams that were abalons. The abalone is peculia absolutely untouched because they the Pacific coast. Its flesh is esteemed in Japan, and its valuable source of mother of peret

is used extensively in the manufactor of buttons, ornaments, &c. According to Mr. Lake it will possible by means of an outlit of the Argosy and Argonaut 111 cover immense quantities o that are not within the reacsurface ashermen or even tinow engaged in the work at shores of California.

While the Argory does not resent a big plant, still it prom--of much commercial value 15 stance, the Argoss, or so will have a suction numper-

capacity to deal with solute in By means of suction pasdown to the submarine end of the tube it will be poswork over a sunken collier and ... cover coal at the rate of approximate a hundred tons an hour naut III. constitutes a working base from which the of the pump can be brought drag over the coal on the sea bed. The underwater worker, using

Argonaut 111, as a base of operator may wear a self-contained diving or have recourse to nothing months plex than a simple headgear of called "divinbood" type. It a practicable to make short distant plorations in this manner and t complish results with a minin risk and in close cooperation w men in the diving chamber of t marine. While the Argonaut busy harvesting at one point " can be looking about for the past be place to operate.

Fishing With a Searchlight.

There is no doubt that an output som as Mr. Lake has just built would mak it possible to accomplish stondary the way of catching fish. Non-the crew, by way of am opened the bottom door of the compartment one night when the was lying at the surface. The lights within the chamber ca beams down into the water through the open hatch, and : minutes scrambling schoolcrowded into the illuminat some of them barely missclear of the water and on to of the diving compartment. T a striking example of the 1

and the impulse of fish to ro Mr. Lake purposes entil Then when they are swarm



SIMON LAKES SUBMARINE WORKING CHAMBER. THE OPERATOR, IN HIP BOOTS AND SURFACE DRESS, GUIDING A SUCTION TUBE IN RECOVERING GOLD FROM THE BOTTOM OF A DEEP RIVER .

ally a diving bell built into the sub-marine and equipped with a hatch or marine and equipped with a hatch or portant particulars. The tube con-ically impossible for the agitation to however, is to be generated aboard the medified, at a dry dock in Brooklyn, so steel cylinder. This craft was equipped with a hatch or door in its floor which could be opened structed in England was not provided reach deeper than the wave was high houseboat and fed down from the Ar- as to increase the boat's surface going with a watertight hatch and valve that would probably never reach a

upon the scabed. The air in the cham-ber was maintained at a pressure suitable to balance that of the outly-to be desired.

COAL FROM A SUNKEN COLLIER DIVERS ARE NOT NEEDED FOR THIS SUBAQUEOUS WORK .

Buffers tgainst Waves.

thus to hold the sea at bay. So much not achieve his ends unless the sub- depth and therefore pounded by the for the original inspiration of the fun- merged and of the tube could be guided | waves directly.

Before going further into the de- Long Island Sound. A coal barge was known to have of the bottom, but skipped from point and to transport them also a scription of Mr. Lake's new apparatus The modified Argonaut was provided gone to the bottom in the neighbor- to point hitting and tearing away at ports for distribution

ROYAL DIPLOMACY IN MANY COURTS CAUSED GREAT OF ANY years ago, in the early days of the alliance between the very remaining vestige of right of sisters of Empered to Offset Finesse of Statecraft Reacted Against interference in the conduct of the for-sisters never knew exactly where they isters active very remaining vestige of right of sisters of Empered Vientian isters of Empered Vientian isters and Brought Nation After Nation Into Great World War-By F. CUNLIFFE-OWEN. isters never knew exactly where they latter's secret agreements Makers and Brought Nation After Nation Into Great World Warwere, or what unpleasant and dis- standings with constant Russia and France, Czar had not married old Emperor Wit concerting surprise was likely to be proved the curse of the H Alexander III, remarked one day to lam's only son, who died as Emperor The Striking Examples Pointed Out sprung upon them; as, for instance, tion, from which it w the French General De Boisdeffre, then Frederick, Germany and Great Britan when Count Witte, on his way home Greeks many years to receive from America after the treaty of Perhaps the most striking

than all the finesse and cunning of actionary and despotic policies of Bis- ioss of her enormous Muscovite trade. diplomatists. It is a pity that France marck. The Chancellor in consequence by doing away with monarchy has re-nounced the political advantage of possessing princesses whom it could effer in matriage as a guarantee of offer in marriage as a guarantee of the national and economic aspirations who brought swarms of German favorof Germany, for the benefit of the land lites in their train to fatten on the land. peace."

overwhelming them with riches, and owing to the fact that the Chan- with all sorts of prerogatives and im-At that time there seemed a wealth of her birth. of philosophy in this utterance of the cellor was enabled, through the old munities denied to the natives late Emperor of all the Russias. For Kaiser, to force upon Frederick and It was popular sentiment that forced suffering. But there would have been written or unwritten, should be com-"the crimson streak of kinship" en- upon his wife tutors, governesses, the Italian Government to declare war chamberlains and attendants of his upon Austria in 1915, thereby joining tered into political calculations to an own choice for their children, the the cause of the Entente. But if pubalmost incredible extent and domestic ties of royalty were regarded as an all his sisters were brought up to exe- against Austria, it was first of all be- deeply devoted to her first cousin, the cruse of the assistance given by the Kaiser, and to the land of her birth. of harmony between the Powers of the Old World. This is no longer the case.

We seem to have reverted to those mediæval eras when dynastic causes were the origin of almost every great stories of the present Kaiser's boywar. hood was to the effect that when on When the history of the titanic con-

flict now in progress, and into which well nigh every Power of the Old and "Would "Would that I could squeeze every the New World has been drawn, comes to be written it will be found that the out of my veins." existence of these bonds of relationship between the sovereign houses of Europe, far from constituting a bulwark of peace have been on the contrary very largely responsible for the last three terrible years of international welter and strife, have served to impart to the struggle a venom, a bitterness, and in some cases a savagery. which would otherwise have been ab sent, and, worse than all, have stultified and defeated all the efforts of the statesmen of the belligerent and of the neutral Powers in behalf of peace.

Reform Certain After War.

When the latter in the fulness of realizing that the enmity of his "All marck in behalf of the temporal sovtime is restored and the nations have Highest" nephew at Berlin for Great ereignty of the papery, but also from at length the leisure to review calmin Britain and for her ruler would event- Austrian invasion. the immediate past and to take to ually develop into strife, considered it Grutitude for their emancipation may safely be assumed that they will pire to make provisions for its safety and savage persecution prompted the take steps first of all to restrict their by means of an elaborate system of Bulgarians to sympathize with their ruler and the members of his house foreign alliances for purposes of de-in the line of succession to the throne fence-not of offence. Russian deliverers and coreligionists in the line of succession to the throne fence-not of offence.

to matrimonial alliances with their Muscovite execuation of Germany man born King is so closely related to own countrywomen so as to avoid all which five years ago found its expression the vernacular of the demo-foreign entanglements, and in the sec-sion in the inauguration of a number house of Hohenzollern that, due to the cratic spirit of the age and of the dependentia of the dependentia of the sec-sion in the inauguration of a number house of Hohenzollern that, due to the cratic spirit of the age and of the dependentia of the sec-week's wash was sent to in and place to deprive their monarchs of of intensely nationalistic measures by wishes of his subjects, he committed claim of the people to a voice in the Farliament, the Kaiser is bound by the to his Ministers nothing of any con- stantine's marriage to the most master- morning."

the French General De Boisdeffre, then visiting Petrograd at the head of a military mission: "Call me an auto-crat as much as you like. But I hold years after taking up her residence in crat as much as you like. But I hold years after taking up her residence in the Petrograd Government having for crat as much as you like. But I hold years after taking up her residence in the petrograd covernment having for crat as much as you like. But I hold years after taking up her residence in the petrograd covernment having for crat as much as you like. But I hold years after taking up her residence in the petrograd covernment having for the petrograd covernment having for crat as much as you like. But I hold years after taking up her residence in the petrograd covernment having for the that alliances of blood, in fact dynas-tio alliances, have a far higher value than all the finesse and cunning of

But if the Germans were so hated in cially in the way of the resale of their imports to Germany, a most strict embargo has been inaugurated against

them by the Powers of the Entente.

consequently no necessity for the embargo had it not been that King Guspresent Kaiser, his brother Henry and lie feeling in Italy was so bitter tay is married to a German Princess deeply devoted to her first cousin, the Vienna Government to those rulers of upon their mother as a dangerous Vienna Government to those rulers of English and very anti-German intriand that Queen Wilhelmins has as consort a German Prince, brought up gante, and upon their father as a Peninsula allied by ties of relationship as a Prussian officer, at the Court of mediocrity, completely subject to her to the House of Hapsburg, in oppress- Poisdam, on terms of the closest indomination. One of the best known ing their subjects.

Germans War on Mentrals.

The participation of Italy in the lands. one occasion he cut his inger rather Triple Alliance has been generally he passionately exclaimed, ascribed to Premier Crispi. But the d that I could squeeze every personage really responsible was the drop of the horrible English blood from tate Duchess of Genoa, a very clever and masterful woman, of German

His manœuvres to exclude his dying birth, sister of the Kings Albert and father from the throne, and after that George of Saxony, deeply attached to unhappy monarch's demise his shock- the land of her origin, and who at the ing treatment of his widowed mother, time when there was so much popular served to arouse all her English coun- discontent in Italy, owing to France's trymen against him, no one manifest- occupation of Tunis, became so ing a greater, indignation than her alarmed for the safety of the dynasty favorite brother, Edward VII. into which she had married that she

William had always been offensive to this genial uncle of his, and now became an object of positive aversion bert, to cause Italy to throw in her lot to the late King, and the batred be- with Germany and Austria, hoping tween these two kinsmen undoubtedly thereby to protect the House of Savoy contributed in a very large measure to from revolution, and Italy not only the present war. For Edward VII., from threatened interference by Bis-

in the present war. But their Ger- deal had been completed.

Sweden and Holland are both en-tirely dependent for the necessaries of of the present Entente yet he made a council Committee on Foreign Affairs. caused every agreement that he had but in the principal plenipotentiary completed without ministerial sanction. initiated or negotiated to be made a and representative of Bavaria in the threatening the Czar that unless he ministerial instead of a merely Federal Council: that is to say, in a yielded he would make this piece of sovereign act, and even went so far statesman appointed and paid by the treachery to France known in Paris, resulting in terrible and widespread as to insist that each agreement. King of Bavaria,

The Kalser, however, affects to the flotation of the large loan then the Canadians have of no such breaches of neutrality, and municated confidentially to the recogimore both the Foreign Relations Com- about to be issued there and imperanized leaders of the Parliamentary mittee of the Federal Council and the tively needed by Russia for the pay- guns, opposition in both houses so as to Federal Council itself, as well as the ment of the heavy cost of her war assure continuity of policy in the Reichstag, where foreign matters are with Japan.

task by the Reichstag and by the en-

event of any change of administration. concerned, and at least on two oc-George V. Has Public Policy. casions has been vigorously taken to

King George received his political training from his father and has pursued the same policy. This is so widely known and understood that no

timacy with his kinsman, Emperor one gave a moment's credence to the William, Prince Henny of the Nether- | lie contained in the Kaiser's teleands. In every monarchical country the graphic confidential message to Presi-dent Wilson, published in facsimile in

spirit if not the letter of the Consti-ex-Ambassador Gerard's book, when tution requires that the conduct of the he claimed that Prince Henry of foreign relations of the nation shall remain in the hands of a Minister of the King that under no circum-State, responsible to Parliament. In stances would Great Britain England, it is true, the Constitution France, and that this promise had Join vests the direction of the foreign af-fairs of the empire in the sovereign ernment then been broken by the English Gov-

without any regard to Parliament, the King Victor Emmanuel since his any treaty or international undertak- a similar degree of statesmanlike caution, and has studiously refrained ing to which the monarch has affixed his sign manual. But the late Lord Salisbury was the last Minister of For-eign Affairs to defy legislative inter-without the cooperation and the entire ference in the business of his depart- approval and knowledge of his ment and to declare to both houses at Ministers.

Westminster that he was in no respect By no monarch has this understandaccountable to them, but solely and ing between Crown and Parliament alone to Queen Victoria-then on the with regard to the ministerial responthrone. It may be recalled in this con- sibility for the foreign policies of the land to the Kaiser in exchange for the than by the Kaiser. Theoretically,

negotiating and concluding arrange-

of its press regardless of party for his fact the revelation has only begun, six feet in length. Two lisregard of the letter and spirit of the But what has already been printed insulated shears to cut th Constitution in matters of foreign serves to recall how Emperor William and make a path abeau solicy, of that Constitution which he concluded, without the knowledge of men carry a wooden

his Ministers, a secret agreement with of rope, one end of which ad sworn on his accession to observe. To what extent the Kaiser went in the late King Leopold pledging the the trench. military support of Belgium to the The men go forward ments with foreign sovereigns behind Kaiser. During the course of a dinner across the rough ground. the backs and without the knowledge of his Chancellors, of his Ministers, of the Committee on Foreign Affairs of are also yours." This came to the ment they set the pale fa Federal Council, of the Federal cars of the Belgian Cabinet. The Pre- and attach the pulley Council itself and of the Reichstag mier and the Foreign Minister at Then they go back to the has been shown in a very striking Brussels made an investigation, ex-Now a box containing fashion by the publication of the se- torted from Leopold a confession of pounds of dynamite is at approval of which is not required to accession to the throne has displayed cret telegraphic correspondence which the existence of his secret military rope. By means of the exchanged during the Russian war convention with the Kaiser, and forced dynamite is slowly have l with Japan, and in the following three bim then and there to withdraw reaches just the right spo or four years with ex-Czar Nicholas, therefrom, under a threat of appeal- all hands retire until day prrespondence which after the latter's ing to the entire Belgian people. Then along comes one e dethronoment was found among the against so gross a violation by the shooters. The Germany imperial archives in the Winter Pal- sovereign of his oath to observe the parently a quiet evening

Revelations Just Begun.

Constitution. ace at Petrograd. moving near their com The correspondence serves to recall At Athens, too, since the dethrone- placement but a sentre the terror which the Dowager Czarina ment of King Constantine and the re- Canadians get under even Marie and the Russian Ministers al- turn to office as Premier of Venizelos, the sharp staccato tari ways entertained of any meeting be- the archives in the royal palace have followed instantly, and the nection that he surrendered Hellgo- nation been more persistently violated tween Nicholas and William. They furnished some very characteristic the explosive by a were only too well aware that Nicholas correspondence between This six toed which causes the group the immediate past and to take to using develop into strine, considered it is particular in the interval of th liament about the matter until the pointed out above, has constitutional undeniable powers of fascination that stantine betrayed Greece to his prec- spiked helmets and defris authority-of which he does not avail he would agree to anything William ious brother-in-law at Potsdam, and height of twenty or thirty King Edward, however, had a keener himself-to conclude agreements with wished. Like so many weak men, sacrificed all her most cherished hopes ward. Every one is sat-

P Clothesite clothesline over No N does not mean that t with the result that it would prevent is camouflaged. It is me German trench mortan-

> To carry out the open nadian engineers and born a foggy evening when th

shells is less daugerous The secrets of the Russian archives nights. Perhaps five me tire German nation through the voice have by no means been exhausted. In One man carries a woo

ment with the Kaiser which com- appeal to his unfortunate s pletely nullified Russia's treaty of al- that in every case it that liance with France. ultimate failure, in disadv On reaching Petrograd Witte taxed Germany and in disaster to

WEEK'S WASH FOR FRITZ