



aged bodies is no longer an uncertainty, but is as sure as the rules of chemistry, Dr. L. H. Voronoff said recently.

Dr. Voronoff recently startled Paris with his announcement of success in the rejuvenation of animals and humans by the grafting of interstitial glands. Dr. Voronoff is the director of the physiological laboratory of the College of France, He has a high reputation as a surgeon as well as an investigator. 0

In addition to the success the doc or alleges in his operations for the estoration of youth, he explained that the operations are extremely simple.

"A local anaesthetic is all that is





HOW THE GUNS WERE BROUGHT INTO ACTION.

ONE OF THE FAVORITE METHODS OF CONCEALING GUNS ON MYSTERY SHIPS WAS TO CONSTRUCT A DECKHOUSE WITH ITS SIDES HINGED TO THE DECK. A PULL ON A LEVER RELEASED THE SIDES, WHICH FELL AWAY FROM THE GUN, AT WHICH THE CREW WAS AWAITING AN OPPORTUNITY TO FIRE.

furnished unimpeachable

slow in seizing. There is hardly any-

CHIEF purpose in writing town, Admiral Bayly showed me a Campbell would probably have served gin shelling the bottom. Indeed, a U-boat caught first upon the fact that the very and his apeptite is as good as that of these articles is to describe the wireless message which he had re- well, but perhaps not brilliantly. In case the merchant ship was faster in such a predicament has only one existence of mystery ships was unactivities during the European cently received from the commandwar of the United States naval forces ing officer of a certain mystery ship operating in Europe. Yet it is my operating from Queenstown, one of time demanded a new type of naval however, it was slower, the passenintention also to make clear the sev- the most successful of these vessels. fighter. To go hunting for the sub- gers and crews lowered the boats and But, before that time has expired, from Germany and had not reeral ways in which the war aganst It was brief but sufficiently elo- marine required not only courage of left the vessel to its fate. In such rapidly firing guns can put a dozen turned. But it was inevitable that a high order, but analytical intelli- instances the procedure of the subthe submarine was won; and, in quent. order to do this, it will be necessary

"Am slowly sinking," it read. aration and detail. Captain Campoccasionally to depart from the main "Good-bye, I did my best." subject and to describe certain naval Though the man who had sent operations of our allies. The most important agency in frustrating the death at the time when it was writsubmarine was the convcy system. An examination of the tonnage losses 1917 and in 1918, however, discloses that this did not entirely pre- fact, he would dine at Admiralty vent the loss of merchant ships. April, 1917, to November, 1918, the monthly losses dropped from \$75,000 to 101,168 tons. This commander to receive the Victoria we realized that the mystery ship number of shells; an inexpensive decrease in sinkings enabled the allies to preserve their communicawore both the Vctoria Cross and the most admirable achievements in the job. tions and so win the war; however, it is evident that these losses, while distinguished service order, and he whole history of naval warfare. We not necessarily fatal to the alled subsequently won bars for each, not have laid great emphasis upon the ships interfered with this simple pro-cause, still offered a serous impedi- to mention the croix de guerre and brutalizing aspects of the European gramme, and compelled the Germans ment to success. It was therefore the legion of honor. When Captain war: it is well, therefore, that we do to use long-range gunfire or tor- while the remainder should lie connecessary to supplement the convoy Gordon Campbell arrived, I found not forget that it had its more ex- pedoes, the submarine commanders cealed until the submarine rose to system in all possible ways. Every that he was a Britisher of quite the alted phases. Human nature may at still persisted in rising to the sursubmarine that could be destroyed, accepted type. His appearance sug-whatever the method of destruction, gested nothing extraordinary. He most cowardly traits, though it also were so expensive that the admiralty in two or three hundred yards, the submarine that could be destroyed, accepted type. His appearance sug- times have manifested itself in its face near the sinking ship. Torpedoes represented just that much gain to was a short, rather thick-set, phieg- reached a level of courage which, I at Berlin insisted on having every bulwarks should fall down, disclosthe allied cause. Every submarine matic Englishman, somewhat non-that was sent to the bottom, it was committal in his bearing; until he in any other conflict. It was re-commander that he had destroyed a ensign should go up, and the guns to U-beat commanders how to meet amounted in 1917 to a knew a man well, his conversation served for this devastating struggle merchant ship was not accepted at its should open fire on the practically saving of about 40,000 tons per year consisted of a few monosyllables, and to teach us how brave modern men face value; in order to have the exof merchant shipping; that was the even on closer acquaintance his could really be. And when the rec- ploit officially placed to his credit, amount of shipping, in other words, stolidity and reticence, especially in ord is complete, it seems unlikely and so qualify the commander and which the average U-boat would sink, the matter of his own exploits, did that it will furnish any finer illusnot entirely disappear. Yet there, tration of the heroic than that pre- the successful, it was necessary if left unhindered to pursue its was something about the captain sented by Captain Campbell and his prove that the ship had actually gone

Besides escorting merchant ships, which suggested the traits that had compatriots of the mystery ships. therefore, the allied navies developed already made it possible for him to several methods of hunting individ- sink three submarines, and which ual submarines; and these methods afterward added other trophies to his ship of his maesty's navy, yet there

not only sunk a considerable num- record. . ber of U-boats, but played an important part in breaking down the Gerwas observed regarding thesepart of 1918, indeed, that the public absolutely lacked nerves; that, when particularly heard anything of the "special serv- it came to pursuing a German sub- specimen of the breed. Just who inthe "mystery" or "Q-ships"which represented one of the most extent to which his mind concen- other devices developed by the war, successful devices for hunting sub- trated upon the task in hand unknown. It was, however the natofficers had received the Victora He had not distinguished himself in Cross, but as there was no citation any way above his associates, and in the early days of submarine war-explaining why these coveted re- probably none of his superiors had fare on merchant shipping. They vulnerable than a submarine on the

V. C.'s."

estimated.

course.

This conflict, however, demanded a than the submarine it would take to chance of escaping; that is repre- known to the German navy. All the new type of warfare and at the same its heels; if, as was usually the case, sented by the number of seconds Germans knew, in these early days, similar grafting operation on another which it takes to get under the water. was that certain U-boats had sailed shots in its hull; with modern well the time should come when a mystery gence, patience, and a talent for prep- marine was invariably the same. It trained gun crews, therefore, a sub- ship attack would fail; the German ceased shelling, approached the life marine which exposes itself in this submarine would return and report bell seemed to have been created for boats filled with survivors, and or- way stands practically no chance of that this new terror of the seas was this particular task. That evening dered them to take a party of Ger- getting away. Clearly, the obvious at large. And that is precisely what has provided glands which secrets that message was apparently facing at Queenstown he finally gave way mans to the ship. This party then thing for the allies to do was to send happened. A certain submarine reto much urging, and entertained us searched the vessel for all kinds of merchant ships, armed with hidden ceived a battering which it seemed ten, Admiral Bayly told me that he for hours with his adventures; valuables, and, after depositing time guns, along the great highways of hardly likely that any U-boat could survived the ordeal, and that, in though he told the stories of his bombs in the hold, rowed back to the commerce. The crews of these ships commerce. The crews of these ships survive; yet, almost by a miracle, it battles with submarines so quietly, submarine. This procedure was popu- should be naval officers and men disso simply and, indeed, so imperson- lar with the Germans, because it was guised as merchant masters and sailhouse that very night. Another fact so simply and, indeed, so imperson- iar with the Germans, because it also believe ors. They should duplicate in all deabout this man lifted him above the hearers as not particularly unusual ing merchant ships. It was not neces- talls the manners and the "technique" commonplace; he was the first Q-boat Yet, after the recital was finished sary to use torpedoes or even a large of a freighter's crew, and, when shelled or torpedoed by a submarine, Cross, and one of the very few who performances represented some of the bomb, properly placed, did the whole they should behave precisely like the passengers and crews of merchant-

Even when the arming of merchant men in such a crisis; a part-the only part visible to the submarineshould leave the vessel in boats, helpless enemy.

evidence

The

When the Buiwarks Dropped.

Such was the mystery ship Idea in crew for the rewards that came to its simplest form. In the early days as "barbarous" and contrary to the it worked according to this pro- rules of civilized warfare. The great The trustful submarine to the bottom. A prisoner or two commander who approached a mys- once apparent. The mere fact that a tery ship in the manner which I have number of Q-ships were at sea, even and, in default of such trophies, the

described promptly found his resting if they did not succeed in sinking place on the bottom of the sea. I many submarines, forced the Gerhave frequently wondered what must mans to make a radical change in have been the emotions of this first their submarine tactics. As they submarine crew, when, standing on could no longer bring to, board, and the deck of their boat, steaming con- loot merchant ships, and sink them fidently toward their victim, they inexpensively and without danger by

suddenly saw its bulwarks drop, and the use of bombs, they were obliged beheld the ship, which, to all out- not only to use their precious torpe ward appearances, was a helpless, does, but also to torpedo without glands from a young goat, again produced youth and vigor foundering hulk, become a mass of warning. This was the only alternabelching fire and smoke and shot. tive except to abandon the submarine danger to human beings beck the monkey tissues which I

standing upright in the water, reeling like a drunken man, while the submarine commanders not to apmarines-although these had been amounted to little less than genius. ural outcome of a close study of Ger- rine, even when the danger had been apparently innocent merchant ship proach on the surface any merchant mans. kept pouring volley after volley into 'or passenger vessel closely enough its sides, is one that will not quickly to get within range of its guns, but there was something in the wind, as merely one of several thousand peculiar mentality of the U-boat com-it was announced that certain naval junior officers in the British navy. manders.

It is evident that the allies could served these instructions the success fined largely to rejuvenating The definition of distinguished minister in the early days of submarine war-probably none of his superiors had in any sense an unusual man. Had the naval war On one of my visits to Queene, taken the course of most naval wars, method was to break surface, and be aimed shot will frequently send it to plete success of the idea depended at mained in force. The allied navies tinuing my investigations."

merely a task of opening the skin, inserting the new tissue, sewing up the slight wound and nature does the rest.

"Seven months ago," continued Dr. Voronoff, "I operated on a widelyknown Parislan man of affairs, who at the age of 66 was in a decrepit state. The experiment was a complete success, although his hair renains white and his face is wrinkled he walks erect, his mind is as active

a young man. "Three months ago I performed a aged man. Everything in his case indicates the result will be the same, but it is too early as yet to give a statement as to his renewed vitality. "The secret of my method is based on the following general knowledge: In various parts of the body nature fluids having vital functions in human organism. For instance, if I remove the thyroid gland from a human's neck he will become an idiot crept back to its German base and within six months. Also , when the reported the manner of its undoing. interstitial glands, which manufac-Clearly the mystery ships in future ture fluid which is absorbed by the were not to have as plain sailing as blood, and thus give to the whole in the past; the game, if it was to body its vitality, become worn out o continue, would become more a battle are removed, the whole body falls of wits; henceforth every liner and into decay.

merchantman, in German eyes, was a "I have proved by numerous expossible enemy in disguise, and it periments that it is possible was to be expected that the U-boat commanders would resort to all means of protecting their craft against them. Safety to replace the forn-out inter-stitial glands of aged animals by those of young animals of the same breed, thus restoring youth to the which

The Only Alternatives.

aged body. Foreign tissues, have thus been introduced That the Germans knew all about worn-out system, are nourished these vessels became apparent when one of their naval publications fell into our hands, giving complete decirculation of the body this new menace. The German news-napers and illustrated magazines also "Some of my most productive ex-

papers and illustrated magazines also periments were carried out on an aged ram. The ram at 14 years cor-responded in age of a human at 78, began to devote much space to this kind of anti-submarine fighting, denouncing it in true Germanic fashion insofar as the exhaustion of organisms is concerned. Taking the decrepit ram in May, 1918, I put his body interstitial glands taken significance of this knowledge is at from a young ram. Within two months he had regained his youthful vigor and activities.

"Then, in order to prove it was not merely a matter of good care that had caused the change, I removed the grafted glands. I found them in a perfect state, as they had not been completely assimilated by the renewed organism

"The ram immediately aged and became even more decrepit than be-I once more introduced fore.

slightest Berlin accordingly instructed the treating humans. A monkey's very closely resembles that mans. Hence'the tissues of hu. are perfectly adapted for grafting in

"There is no danger of thereby bru

What the Q-Boat Was.

was little about it that suggested order to obtain such proofs of suc-It needed no elaborate story of his warfare. To the outward eye it was cess, the submarine had to rise to the performances to inform me that Cap- merely one of those several thousand surface and approach its victim. man submarine morale. For the tain Campbell was about as cool and freighters or tramps which in normal search for food, especially alcoholic greater part of the war the utmost determined a man as was to be found fimes sailed sluggishly from port to liquor, was another motive that led in the British navy. His associates port, carrying the larger part of the to such a maneuver; and sometimes expedients; it was not until the early declared that his physical system world's commerce. It looked like a mere curiosity, the desire to come to close quarters and inspect the consedirty and uninviting quences of his handiwork, also im ice vessels" that came to be known marine, his patience and his persist- vented this grimy enemy of the sub- pelled the Hun commander to take what was, as events soon demonence knew no bounds; and that the marine is, like the origin of many strated, a particularly hazardous risk. This simple fact that the submaoperating for nearly three years. It When the war began, Captain Camp- man naval methods. The man who realized, insisted on rising to the suris true that the public knew that bell, then about 30 years old, was first had the idea well understood the face and approaching the vessel which

The Germans had a fairly easy time

wards were given, they were known ever regarded him as in any sense an sank as many ships as possible with

This type of vessel was a regular ship's papers would be accepted. In