

**THEIR DESTRUCTIVENESS IS GREAT**

designer of the "Chambered Nautilus" says they will never do for carrying passengers.

The same inexorable reason, many would hold upon regarding me as the inventor of the Nautilus, of the submarine, and that, no doubt, is the reason of the startling request made to me by America to give my views upon its future.

I find the task no easy one. To believe with I am not in any way what the inventor of submarine navigation, and reference to the author (I will show that many years—fully 20, I should say, before I wrote about the Nautilus—the Italians were as well upon submarine war vessels, and other nations were busied with them too. All that I did was to avail myself of the great privilege of the Boston writer, upon every scientific difficulty with fancy's seven-league boots and create on paper what other men were planning out in steel and other metals.

The future of the submarine as I regard it—and I'm here including all sort of prophecies—is to be wholly a war future. The Nautilus, as I have written of it, will never be, I think, an actual fact, and I do not believe that under-war ships will be built to fifteen years to carry traffic across the ocean's bed in America and to Australia. Drive if the air difficulty were successfully encountered (and I have

of an invention to think that in the future they will be employed that they are being, and secured by me for two men only will be absolutely no concern, all will be done with infinite accuracy to these purposes, and beneath the ground vessels, and I show these things up. I do not think that any apparatus will be found to overcome the intense reality and certainty of submarine and eventually when every nation has the few hundreds of these little vessels what to do war with them? They may be able even to blow up huge tracts of country, and contract us, some day, who know?

Of course, before these things can be improvements in the submarine will have to be manifold and almost to wonderfully numerous as the benefits of this greatest wonder of man's actions, but these things will, I think, be possible.

**Deadly Foes Under Waves.**

I followed very carefully the experiments made lately during the French maneuvers in the Mediterranean and during the maneuvers of the English fleet, and I was very much struck by the accuracy with which the submarine boats were managed to slip a strike and get away in safety.

Imagine hundreds of these vessels with their deadly freight. Can you suppose the sea means would compare their deadly power? I do not think so. The reflection of the war, the depths to which the submarine can sink, its freedom from all observation—all these things make it the deadliest of war inventions, and in future years, when I myself am under ground, these powers will be enhanced. I do not think that apparatus will be found to render them more harmless. The sea is hard to pierce, and I can think of nothing more than to render the submarine men on board the submarine vessels to trace the tracks of their deadly little foes beneath the waves.

But as a commercial item in the world's civilization I do not think that submarines have any future. Air may be found for them, not even so, it will never be found plentifully enough to make it possible for a large number of passengers to travel for any length of time in comfort. Electricity for their propulsion may one day be extracted from the sea itself, but I have doubts of it, and even if these things were done, the pressure of the sea at any depth would crush a submarine to fragments, unless some mechanism of metal were discovered which would withstand the pressure. Think of the strain a trans-Atlantic submarine would have to be and think how slowly it must travel, owing to the pressure of the waters round it, and tell me if you think a Makoto will ever be made to travel to New York upon the sea bottom.

I don't think it very grave, and, as I have said, I do not see that there is any need for submarine trans-oceanic vessels. But submarine war boats are in the near future, and that will, I believe, prove the big end of the boatload wedge which will come war to roam between nations, owing to their very deadliness. Undoubtedly their work will not be done in my time. I am a man of peace and should have loved to see it.—By Julius Verne.

Tuberculosis causes some 12,000 deaths annually in Paris.

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anash8356  
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