

RUSSIAN HEADQUARTERS FIRED BY SHELLS



Russian field gunners in front of their headquarters were determined to hold out. The Germans after getting the range passed them explosive shells into the headquarters camp and set the powder off. The soldiers are shown packing up preparing for a hurried evacuation.

HOW SUBMARINE DOES ITS WORK OF DESTRUCTION

Torpedoing of Ship Described From View Point of Attacker and Attacked.

FREIGHTERS ARE EASY PREY

Ingenious Instruments Make the Pointing of the Torpedo Very Simple—Missiles Usually Launched From Distance of Two Miles.

New York. Early in the great war the world was astounded by the "London Official," that these British scoundrels had been sunk by torpedoes. Later a wave of wonder spread over the civilized world when Berlin announced that all three sinkings were the work of one submarine, the U-30.

From that period of the war right up to the present time the operations of undersea fighters have been the interest of every follower of the gigantic events.

Where will they lead? How does Germany keep it up? Why doesn't England get after the Germans? These are questions asked continually. Others, which show the keen interest in submarines, are for information regarding them. What actually happens when a submarine fires a torpedo? What is the usual distance between the submarine and its intended victim? Is she on the surface when making the attack?

A succession of events has made it possible for statements to be obtained of men and women on torpedored steamships, and at least one offer of a German U-boat has been able to tell his story regarding such attacks.

Every navy guards with great care its submarine secrets. Long before the present war the United States navy department issued orders forbidding anyone to board its little fighters unless they be in the navy or armed with naval permits. The same situation obtained in foreign navies. Few books can be presented with the data that are of most interest. A reporter for the New York World, however, has obtained from the highest authority the facts that follow.

Launched Two Miles Away.

In the first place no submarine can launch its torpedo with any hope of hitting the target unless the latter is seen by the man at the periscope. Therefore it must be near the surface so that observations can be had. Torpedoes have a range of 2,000 yards along their line of travel. As a general rule the German U-boats used in attacking merchant vessels launch their torpedoes from a distance of two miles. At that distance it is very difficult for anyone on the doomed vessel to observe what is about to happen.

"Torpedoes travel through the water at a rate of from 28 to 40 knots an hour. The average speed figured in hand ranges from 10 to 30 miles an hour. As the torpedo speeds through the water it makes a wake like a huge tidal wave. In addition to the terrific roar it is followed by the exhaust of the engine used by the submarine to move it along.

The submarine is moving along just as though it were a boat. She is well aware of the wake she is creating and uses it to advantage. We know that when she submerges the air bubbles are taken up and the water is forced out. We also know that when she comes up again the water is forced out and she goes down again.

Thus she is able to move along without being detected by the eye of the observer.

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