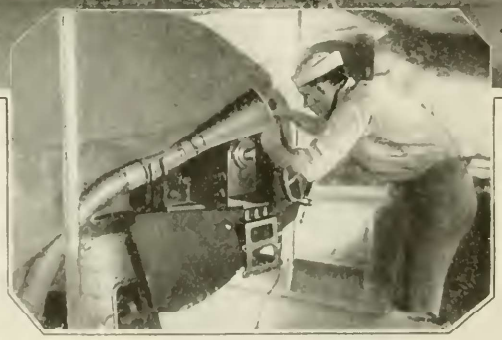
Speaking Tubes for a Ship's Gunners

Reporting the range, the hits and the misses

Photos by Naval Constructor Elliot Snow, U. S. A.

IN a naval battle, the range is obtained principally by men stationed in the mast tops. The readings of their instruments are telephoned down to the officers in the plotting room, below the warship's deck. Here the instrument readings are quickly transcribed into terms of gun ranges and of angles of horizontal deflection. These calculations are sent to the gunners through speaking tubes, although telephones and numeral indicators are often used, to make sure that the orders will be understood.

A receiving and transmitting headset as well as a speaking tube is shown at right



Above: A torpedo tube operator with the voice tube outlet beside his ear

A sight-setter's voice tube equipped with a megaphone attachment, at the left

For when the battle waxes hottest, either a voice tube or a telephone is likely to be swept away. In big battles, the gun that has but one channel of communication stands grave chances of being cut off from the rest of the ship. Should that happen,

the gunners would have to depend upon the gun's telescopic sights, and there would be no checking up of hits or misses by the spotters in the mast tops.

Thus, the means of communication is the crux in the modern method of pointing and firing a battleship's guns. In our Navy, voice tubes are generally preferred to electrical apparatus. Speaking tubes are just metallic pipes made airtight.

Why Do You Laugh When You Are Tickled?

ALTHOUGH it is usually done in fun, the habit of tickling is supposed to be a somewhat dangerous one, according to physicians. The ticklish areas are located over the least protected parts of the body, where delicate vital organs are to be protected. The reason for the ticklishness is that the skin is highly sensitive there and "aware" of intrusion, as a means of protection from possible injury.

This sensitiveness, or awareness, the physicians say, is a relic of the days when man's prehistoric ancestors had to guard their lives constantly against creeping insects and the heavy penetrating pressure of animals' teeth. That is why, according to this theory, the tickle reflex is elicited principally by a light running motion over the skin, and by sudden prods.

The reaction, in this age, is a violent discharge of energy in the form of laughter and efforts to be free. But it is easy to imagine the shrieks of terror or pain that might have been the forerunner of the laughter. Humanity takes ages to outgrow its prehistoric impulses.

The Liquid Fire of the Trenches Is Not as Deadly as It Looks

THE effect of jets of liquid fire on men in the trenches is more terrible to the eye than to the body. But despite this fact, it is still used as a weapon. The bulky, rectangular tanks found in the original outfits have been replaced by the less cumbersome and more efficient "life buoys" and "bombs" of the latest flame projectors. In operation, the Germans let out the gas under compression, so that it forces a stream of combustible oil from the buoys through a connecting line of hose. The oil, which travels fast under the great pressure, passes a lighted wick in the nozzle of the hose. The burning jet is then directed toward the enemy.

From Illustrated War News

The highly compressed gas in the "bomb," on being let out through the "buoy," forces out the combustible oil with it

But improve their apparatus as they may, the Germans have no control over the action of the air. By lying flat at the rear of their trenches, the men, being attacked, are in little danger. It is the German soldier who has suffered most from fire. The British, in self-defence, have combated liquid fire with the flaming shell. This, as explained in the October issue of the POPULAR SCIENCE MONTHLY, does not ignite until it hits the ground. If the guns are pointed so that the shell strikes just in front of the trenches, both flames and débris will shower over the enemy troops. Moreover, the British have found that by firing at the enemy's tanks, these are often exploded, killing their operators in the action.