

D. J. am sending a check for July 5,1961 your cape phone bill. Down forget to Dear Bugg -We called Leargea this evening but got the answer that the was still at the office studying - and that you had her can - Hope you pecked her up on time. I am enclosing a letter which come in the mail today. Not much else going on around town. The Fourth was givet and eve saw nobody and Reard nothing from anybody - so I suppose everyone was doing just what he wanted to do. To love most likely over at lendy's place - and the Listers probably had a big day at the Poroakside Parken the first of July, & evas appointed Director of Curl Defence and Disaster Control for Ramsey- and also the District Director for Franklin Lakes, Oakland, lelychoff, lepper Saddle Kiver, allendale and Waldwick - so it appears that I will have more to do in the future with Curl Defense. It appears likely that the Dept. of Defence is going to have a great deal more to say about Curbalepeure in the future and parable exercise more control over CD also. Perhaps that coved lead to a full time job somewhere along the live.

I am glad that you are having a good time and learning something. Of course, the repairs ships are not combat ships and do not have the armament that even the destroyers have. Unti aircraft defense against a modern plane is mel-except for a lucky hit. Things move so rapidly that compulers are a necessity - and radar control of gun fire necessary to even have a remote chance of hetting a combat place. The new fighters and light hombers the carriers have on board more at the approximate welacity of the 3 guns - 1200 mph = about 660 yds see - ar close to 2000/ see. Your larget practice animunities for the 3" gun probably has about the Same mozzle belocity as the service anno is only about 2606/see, if I remember correctly -The 3" gens are a re- hash of the old 3" loe had during WWI, and the mounts have been revised to permit high angle fire. They were pretty effective against the comparatively slow roomph howbers and dive bombers at the start of well, but were not to hat as place speeds went up. Cet Honolulu an Dee 7, 1941, we find 5-3" assentiarrest gives bearing on a squadrow of Jop places and turned them away from Houselele and the

electric plant, but it was done by throwing up a barrage ahead of them. We get up about 200 rounds of fused projectiles ahead of these and they ded penetrate the harrage about 2000 yards out, but last their nerve whom they got into range of the To mm gues which really were hetting them. We had six a seven 20 mms hearing on them and at 2000 yards rapid fire and tracers got les hat and they turned away before they got cuto rouge of the 50 caliber guns. That squadrow of places were approaching at about 500 foot allitude and we setting ducks for us because they approached the Janey on the part quarter where all but one tredge 3" would bear on them. at that time no one had thought of resung shrapnel in the larger yours against planes, so we really had little effective fire power. The Lavey had 3- 5-wich 51 calebre guns which were wreked because their muzzle belocity was 3150/ see, but they were powder bag guns and could only be elevated about 20 - and we did not use any of them. Nowadays you have only a few minates about 20 seconds after the planes come within

range to get them - and that means 2 or 3 rounds from any hand operated gum. Surving that have the plane would be firing 5" rockets at you, so - -. Primarely, the gens are for anti submarine use just to keep the old subs down and restrict their maneuverability to 6 or 7 Knots. Jaday, a nuclear sub could run circles about an AR and most of the escart vessels, particularly with a moderate sea running. Donar has been improved greatly, but as the speed of the screen vessel increases much about 15 Kts the effective range of Sonar falls of rapedly, especially in morthern looters. Out in the Pacific we wood If got excellent results with the old gear up to about 3000 yards at 12 Knots - but at 20 Knots the Sonar was all but useless. Our attacks were made at 12 Knots, usually, and, with the 300 and 600 pound depth changes, we got one sul about two welks after the war started - the first sub sunk in Hawaiian loolers. It took about 35 depth charges from rackon K guns to accomplish the job. We know we got the sub herause we got lots of ail, passing through a heavy diesel oil slick. We did not peck any of it up because we were

stell searching after subsidence of the blasts calined down, but we did have ail coming up for ten days or so afterward from the Same parition some 31/2 miles south of Dismoud Head - in 200 fathours of water. We never stopped during the war to investigate any thing. To do so made your ship a sitting duck and an alert sub commander could have really clobbered, a ship dead in the water, after a depth charge attack there is so much turbulence in the water that the pour is useless will all of the turbulence has subsided in the vicinity of In those doep we made the attacks with a stop water in one hand and did some good head work. It was before the days of CIC, plotting rooms, etc. The coming affece listaved to the pings from the Donar, and by Doeppler effect estimated the sub speed and course. and then trailed the sub, closing at a rate of 100 yards a minute, or so slow that sub did not realize the closing rate - and we never speeded up for the attack after contact was lost - just holding the course and speed. By estimating the probable depth of the sub and the live it would take the depth charges to suck to his level, we pish waited and

counted time until we estimated that we were ahead of the sub - then used the racks and K guis to lay a pattern with atternate shallow and deep charges. The Javey was a tough ship and we did not always wait for one charge to go off before dropping another, especially if the ships speed was 12 Kinds or better. We dropped charges at a rate of 5 Kirols once with no damage to the ship. There is always a danger of counter-mining a charge, but when you are in an attack, density of the charges pattern is what counts and one takes calculated risks. The hedge-hap of today is probably much more effective than the old depth charges because they are contact weapons, and they can be fired while you still have contact with the seeb-Well, see if my deductions are correct. One thing the gues crew - and Coller - must do is to lead the target. Learn to figure out the relative motion in your mind and apply corrections to the ranges and see how closely you can resolve the problem Well, have a good time - Let us hear from yours: Dad.