

GRAMPAW PETTIBONE

Epitaph

The following is quoted from a Board of Investigation:

"This student was not wearing his shoulder harness at the time of the crash as required by existing orders, although such harness was properly installed in the plane. Had he worn the harness, it is likely that fatal injuries would not have been suffered."

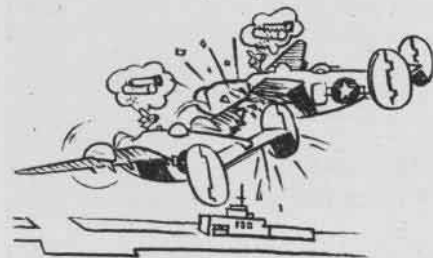
 **Grampaw Pettibone says:**

Don't let a board of investigation write this as your obituary.

This student didn't expect to crash—and neither do you. But what if your engine quits on take-off and you are too low to jump? You wear a parachute—why be too proud or too careless to wear your shoulder harness?

Death Lurks In Traffic Circle

Two pv's about to enter the traffic circle converged at an angle of approximately 40° and collided. Both aircraft crashed to the ground out of control. Four men in one plane and two in the other were fatally injured. From the

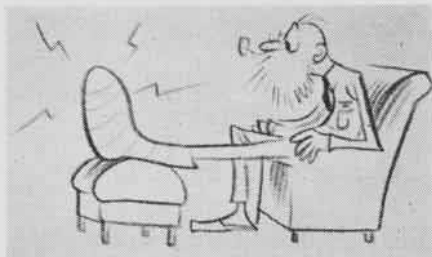


testimony of observers it was apparent that neither pilot was aware of the imminence of a collision, as there was no avoiding action taken by either plane.

One of the aircraft was on a routine training flight with the instructor at the controls and the student in the co-pilot's seat. The other plane was on an engine run-in flight and was manned by just one pilot and a mech who apparently was occupying the co-pilot's seat at the time of the collision.

To prevent recurrence of such a tragic accident this unit has taken the following action:

"The accident and its causes have been widely publicized in the organization in an effort to impress pilots with the necessity of maintaining a sharp look-out at all times. Also, in view of the possibility that a qualified pilot in the co-pilot's seat of the second plane might have seen the other aircraft in time to avoid the accident,



two pilots are now required for all flights of dual control multi-engine service type planes."

Wrong Grade Fuel

Due to loss of engine power, a TBF-1 with target in tow, experienced difficulty in climbing after take-off. The pilot dropped the target in an effort to stay in the air, but the plane fell into a spin and crashed, killing the entire crew. 91/96 fuel was being used on this flight.

► *Comment*—Of course, the pilot was at fault in climbing so steeply as to lose flying speed.

He might have had more power, however, and thus avoided the accident, if this squadron had not ignored the provisions of TBF-1 Airplane Bulletin No. 78 which prohibits 91/96 fuel in this airplane when towing.


On One Engine

Seven hours out of Alameda on the way to Honolulu, a small fire was detected in the starboard engine of a PBM-3D. The engine was cut and the fire went out. The engine was re-started twice, but each time the fire began again and blazed until the engine was stopped. The propeller then was feathered. All loose gear and bomb bay tanks were jettisoned and the plane trimmed for single engine operation.

Altitude was lost until at 900 feet, with 2400 rpm, 42 inches h.g., and an airspeed of 90 to 95 knots, the pilot found that he was not only able to maintain altitude but could climb slowly. Fuel consumption at this time was

157 gallons per hour. The pilot leveled off at 2500 feet and by gradually decreasing rpm and throttle, consumption was reduced to 97 gallons at 2300 rpm and 33½ inches h.g.

Fuel exhaustion finally forced the plane down short of its destination. A good landing was made in the open sea with no injury to the crew nor damage to the plane.

 **Grampaw Pettibone says:**

Good work!

The competent handling of the plane in this case, brings to mind the verse written by my old friend, Edgar A. Guest:

*Somebody said that it couldn't be done
But he, with a chuckle, replied,
That maybe it couldn't but he would be
one
Who wouldn't say so 'til he'd tried.*

Parrot Fever

 **Grampaw Pettibone says:**

When you hear anybody blowing about how hot a pilot he is, don't take it too seriously. Remember the parrot—among birds he is the best talker and the worst flier.

Repair Tickets

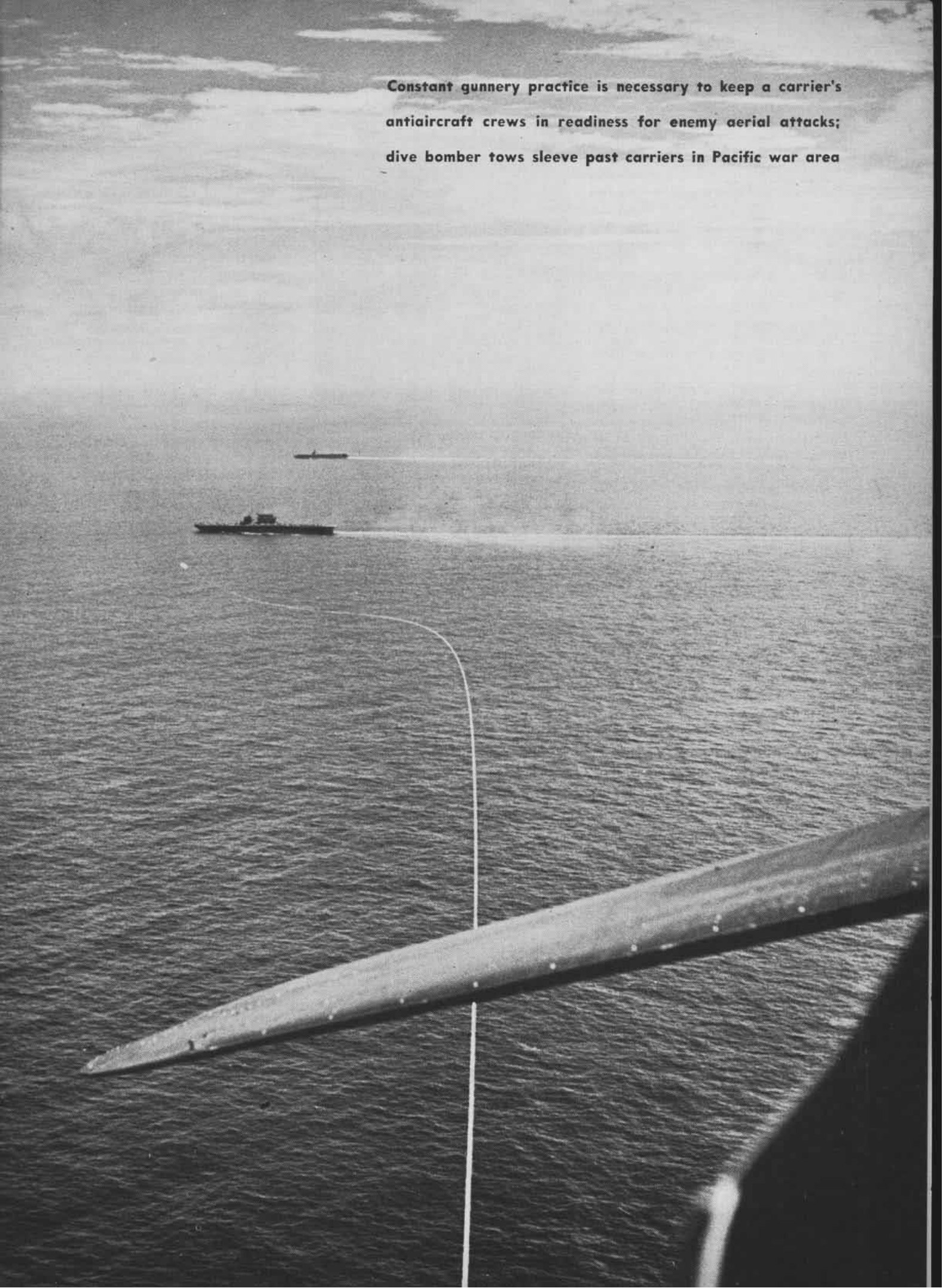
The crew chief of a fighter plane noticed a hydraulic leak in the bank valve of the landing gear and installed a new valve only to find that it, too, leaked. The next morning he put a new bank valve in the ship and obtained another mechanic's help to connect the hydraulic lines. A third worker was left to clean out the cockpit when the others went to chow. This man was not told that the landing gear still had to be checked. In an effort to be helpful, he started the engine. However, the bank valve was not correctly aligned and the landing gear collapsed.

As a result of this accident, the following repair procedure, which should effectively forestall accidents of this nature, has been established in this squadron and is recommended for general use:

"The engineering department has been instructed to adopt measures whereby aircraft undergoing repairs of any kind will have placed upon the propeller blade a large and conspicuous notice, covering in detail the work that has been done and that remaining to be done. An identical notice should be placed on the instrument panel."



Constant gunnery practice is necessary to keep a carrier's anti-aircraft crews in readiness for enemy aerial attacks; dive bomber tows sleeve past carriers in Pacific war area



Tab-Caused Crashes

Case 1. During take-off, an R5C-1 was seen to leave the ground after an unusually short run. The tail was never raised to normal take-off position. After becoming airborne, the aircraft entered a very steep climb, stalled at 200 feet with practically full power being developed, fell off on the left wing, and crashed. Evidence indicated that the pilot had attempted take-off without neutralizing the elevator trim tabs after the last landing.

Case 2. The direction of take-off of a PBM-3 in semi-restricted waters was approximately 35 degrees out of a 15 knot wind and into fairly heavy swells. At the start of the take-off the pilot had his flaps up and his elevator tabs set at 7 degrees "up." Flaps were lowered to 20 degrees when the speed reached 45 knots and then to 30 degrees, at which time the elevator tabs were set to the full "up" position.

Shortly after this, the plane either was prematurely pulled off the water or was bounced into the air by a swell. Whichever the case, the plane could not maintain altitude, owing to its slow speed and high angle of attack. The airplane stalled. The throttles were closed when the nose dropped. The plane hit the water at an angle of approximately 20 degrees and bounced sharply into the air, nose up. Throttles were applied on the bounce, but the full up elevator tab setting made it impossible for the pilot to push the nose forward and prevent another stall.

The airplane stalled and bounced three times, each time to a higher altitude. It crashed from approximately 80 feet, following the third stall.



Grampaw Pettibone says:

The greatest attention must be paid to weight, balance and tab settings of heavy airplanes. As weight and size of airplanes have been increased, the tabs also have had to be enlarged to exert a greater effect. Consequently, tab settings on these large airplanes can create forces, even at low speeds, greater than can be overpowered by the pilot.

Better get tab conscious before you get caught in some such predicament. Tabs are a big help to pilots in counteracting heavy control forces, but they are also a source of great danger if improperly set during take-offs, landings or dives. I know whereof I speak, having practically looped an SOC off the end of a cruiser catapult once when I neglected to correct the large UP tab setting left on after the last landing. The only thing that saved me was the fact that the stick forces in that plane were relatively light.

Don't Commit Suicide

The photograph above shows how an SB2A pilot brought about his own death. Note how, apparently to pre-



vent the ends of the shoulder harness adjusting straps from flapping around, they have been tied together, thus forming a loop across the pilot's chest.

In this case a forced landing was made in a river. The plane sank rapidly. The passenger had time to get out, but the unfortunate pilot had *tied himself in* and sank with the plane. His error is one pilots should not repeat.

GRAMPAW'S SAFETY QUIZ



All aviators should know the answers to these questions. In the air, the penalty for not knowing may prove fatal. If you miss an answer on the ground, penalize yourself by looking up the reference.

1. What type of flying may be engaged in when carrying women members of the armed services?
2. Is it necessary that a competent operator be in the pilot's seat when an aircraft engine is started or is running?
3. While on civil airways, at what altitude should you fly when heading:
a East. b West. c North. d South.
4. What is the correct procedure for turning over cold engines and engines that have not been operated for a period of one hour?
5. On all oxygen familiarization flights in aircraft that do not provide dual controls for instructors, is it necessary that accompanying planes be designated?

Answers on Page 40.

Wheels-Up Landings

Wheels-up landings continue to be a source of frequent crashes in spite of check-off lists and warnings from the tower. One large command went a step further by stationing a signalman at the end of the duty runway. The signalman is required to check the landing gear and give an "R" if the gear is extended. If the gear is not extended he gives a "wave off" which is mandatory to the approaching pilot.

The manpower saved in overhaul and salvage more than justifies stationing a signalman at the end of the runway. The number of wheels-up landings is reported to have been materially reduced. Unfortunately, no record was kept of the total number of planes which were prevented from making destructive wheels-up landings.

It is appropriate that all air activities, where a problem of wheels-up landings exists, should consider the above outlined procedure as a possible solution. Such procedure in no way relieves the pilot from his responsibility, nor does it in any way modify existing instructions regarding use of pyrotechnics during night operations.

Wing Failure

An SB2C-3 pilot (531 hours) was engaged in dive bombing practice. His third dive was very steep. During high "c" recovery, the wing failed at the inboard end of the slat. Both the pilot and radioman were killed in the crash.

The following is quoted from the report of the investigation:

"The pilot had made it a habit to wrap up his plane on coming out of his dives, in order to observe his own drops. In this fatal dive, he was very steep. There is no question that the airplane was subjected to high "c" during pullout, as evidenced by marked wing-tip streamers during the early part of the recovery. The additional stresses imposed on the wing by the addition of hard left rudder and hard left aileron exceeded the ultimate strength of the right wing, with consequent failure."

► *Comment*—The board's opinion is concurred in.

The danger of using ailerons during pullout has been repeatedly stressed in this section. T.N. 72-44 also warns against this practice. Paragraph 9 of T.Q. 101-44 further points out that the light elevator control forces in this airplane make it possible to impose severe stresses during pullouts and strongly recommends that accelerometers be used to acquaint pilots with accelerations encountered in combat maneuvers.