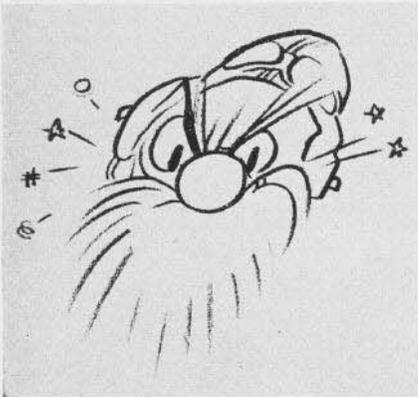


# GRAMPAW PETTIBONE



## Pre-cautions

The pilot of an SNJ-4 lost control of his aircraft on take-off and hit a truck which was authorized to be on the field. Fortunately, none of the men on the truck was injured because they had been warned to be on the alert for just such an emergency. They all jumped and ran to safety.

The following remark is quoted from the pilot's statement: "I would not be alive today had I not securely fastened my shoulder harness before take-off."

## Check Your Altimeter

Two serious accidents have recently occurred during night landing approaches which may have been due to wrong altimeter settings. In one case it is known that a drop in barometric pressure had resulted in the altimeter reading being 200 feet higher than the actual altitude.

The patrol wing in which this latter accident occurred has added the following requirement to the landing check-off list: "Check Altimeter Setting with Control Tower."

► **BUREAU COMMENT.**—This requirement is recommended to all squadrons concerned, where radio altimeters are not installed.

Although this is now standard doctrine, it is felt that pilots may often neglect to make this check because they erroneously believe their altimeter readings to be correct. This error will be obviated and possible accidents avoided if pilots are required to check altimeter settings with the control tower when returning from flights during periods of reduced visibility, whenever conditions of radio silence permit.

## Don't Lose Your Balance

In reporting a recent fatal crash of a PV-1 airplane following take-off, the trouble board commentary stated: "The pilot used 20% flap for take-off which is recommended for short-run take-off. The total weight was 28,379 lbs. with c. g. at 35% of mean aerodynamic chord."

The pilot was unable to overcome the tail heaviness, the plane stalled, and struck the ground during completion of recovery.

► **BUREAU COMMENT.**—Attention is invited to the *Erection and Maintenance handbook* as well as the *Pilot's Notes* for the PV-1 which state that the aft c. g. limit is 33.1% M. A. C. for safe operation. Had full consideration been given to proper airplane balance before take-off, and had the limits as set forth in technical data been respected, this crash probably would have been averted.

Any PV-1 loading condition which results in an aft c. g. location above 33.1% cannot be considered safe even with 0% flaps for take-off. While it is possible to use as much as 20% flaps for short-run take-offs, it should be realized that the resultant relatively slow take-off speeds will lower the safe aft c.g.% M. A. C. value.

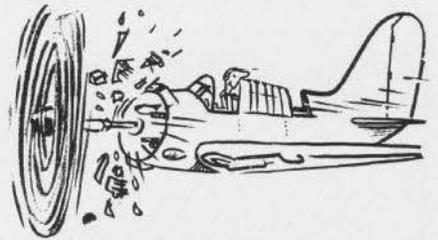
## Attention Avenger Pilots

There have been several cases of pilots retracting the landing gear on TBF and TBM airplanes while on the ground. These accidents usually occur as the result of pilots attempting to raise the landing flaps, but instead raising the landing gear lever by mistake. This is still all right if the airplane is resting firmly on its wheels, but the locking feature of the landing gear becomes inoperative whenever the left wheel is nearly extended. This may occur on the ground as the result of a

bounce, or in a short turn. These accidents must, therefore, have occurred when the left wheel was extended, indicating that many similar accidents were prevented only because the left wheel was not extended when an attempt was made to raise the landing gear lever. The landing gear will not retract unless the control lever is raised. Moral: *Know your cockpit!*

## Propeller Precaution

While in flight, the propeller of an SB2C-1 failed in automatic. The pilot switched to manual, set r. p. m. for 2,150, and commenced a dive from



10,000 feet. During the dive, the engine oversped, causing complete engine failure.

► **BUREAU COMMENT.**—If an electric propeller is set in manual at any speed in level flight, it will allow engine r. p. m. to increase as flight speed is increased. In this instance, the manual control was set for 2,150 r. p. m. in level flight. During the subsequent dive, the r. p. m. exceeded the 3,100 r. p. m. limit of this engine, with consequent failure. To make certain that the engine does not overspeed, dives may be made in *full manual high pitch*. This will insure against governor or circuit failures which may occur during dives made with propeller in automatic. For actual combat operations, however, diving in automatic is the only practical arrangement.

Technical Order 16-41 should be thoroughly understood by all pilots flying aircraft equipped with constant speed propellers.

## Grampaw Pettibone on Glide Bombing

To call a pilot a "glide bomber" used to be a term of derision. Recent events have changed all that; glide bombing has more than proved itself and the title now carries a mark of special respect.

The difference between glide bombing and dive bombing is indicated by

## Pettibone Harps on Training

Maybe you think I've been hipped on the subject of cockpit drill and knowing your airplane. Listen to this remark of a squadron commander who has been out there: "A pilot is no damn good in combat as long as he has to think about handling his plane."

the titles; it is mainly a difference in the angle of dive, with greater speed and acceleration necessarily employed in dive bombing. This difference, however, is not always made by pilots engaged in these two methods of attack. This is unimportant where dive bombers are used in glide bombing, but it may become serious when aircraft which were *not* designed for dive bombing are used for this purpose. A particular case in point is the TBF-TBM model airplane. It is basically a torpedo plane and has sufficient strength to withstand the stresses of glide bombing, but *not* dive bombing.

The considerable number of structural failures which have occurred during bombing runs with this airplane indicate that some pilots are trying to make a dive bomber out of it. They are deliberately exceeding the speed and acceleration restrictions, laid down in Technical Order #37-43, and often with fatal results. Those are the maximum limits; they cannot be exceeded with impunity!

The Bureau has recently directed the installation of visual accelerometers in these airplanes. They should be used in training to acquaint pilots with the actual acceleration (g) experienced in pull-outs. Before students are permitted to make runs on a target, their training should consist of a gradual transition from shallow angle glides up to glides of about 40-45 degrees, with pull-outs studied in reference to the accelerometer. This training should continue until the pilot has assured himself of his ability to make his runs without exceeding the

speed limit and to recover without exceeding the acceleration limit.

The limitation of 40-45 degrees is recommended because, with wheels down, bomb bay doors open and using minimum power to keep the engine cleared, this glide can be maintained under all load conditions without exceeding the restricted speed. If a greater glide angle is used, or if other of the above provisions are changed, special attention must be given to beginning the pull-out before exceeding the speed limit. In this connection, pilots are cautioned that speed continues to increase during the first part of the pull-out.

Accident reports indicate that several wing failures have been caused by the excessive use of ailerons. The application of ailerons results in unsymmetrical loadings and greatly increases the possibility of failure. A weaving approach is often necessary, as is some turning during the glide, but severe "corkscrewing" should be avoided when approaching speed limitations. The allowed limit of aileron control, as given in T. O. #37-43, is the force required for full aileron deflection at 200 knots. Learn what that force is and don't exceed it!

Technical Order #84-42, particularly paragraphs 11 and 12 concerning pilot technique in dives and pull-outs and in gusty air, and Technical Order #37-43 should be studied and thoroughly understood before making any bombing runs.

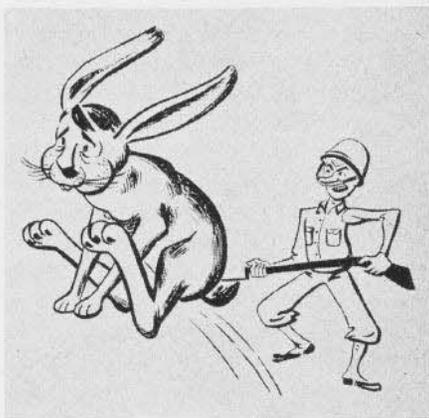
Once you have accepted this airplane as a *glide bomber*, it is relatively easy to avoid exceeding the maneuvering restrictions.

## Navy Fights Well on Land

### Inhuman Foe Finally Annihilated

NAS, CLINTON—In a lightning raid, a striking force of officers and men especially trained in Commando tactics wiped out a garrison of enemy jackrabbits and established a bridgehead a mile wide along the north boundary of this station.

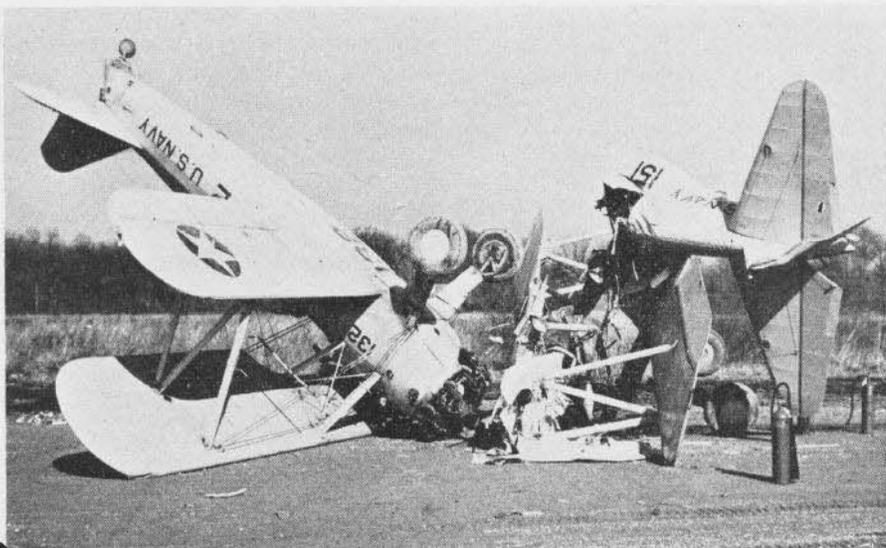
The raid, planned to wrest control of the station's Victory garden from the long-eared foe, was considered a local success. The defending jackrabbits were caught flatfooted, apparently unaware of the Commandos' presence until the raid was sprung. Enemy losses were estimated at approximately 100, while the NAS force suffered no casualties.



The raiders included a score of officers armed with shotguns and more than 100 enlisted men, volunteers from Public Works, the master-at-arms force and other departments, who went into the battle armed only with billy-clubs. It is believed that the raid marked the first instance in World War II in which Navy forces have been employed in his type of combat.

The Commanding Officer deployed his raiders in a line of attack approximately a mile wide at the rear of the radio transmitter building. A few jackrabbits on patrol were found before the actual raid was launched, but they were annihilated before they had a chance to warn the main enemy body.

The Commandos went into action at 1519, advancing steadily westward for a distance of two and one-half miles before they gained their objective and retired safely. The surprised enemy filed in confusion from the Victory garden territory and were mowed down by gun and club.



THIS IS WHAT HAPPENED WHEN A PILOT IN THE LANDING CIRCLE NEGLECTED TO KEEP THE PLANE AHEAD OF HIM IN SIGHT. (NO ONE WAS SERIOUSLY INJURED.)