

Preparing for Pushbutton War

## Gruelling Tests for New Planes Are Vital Part of Navy's Plan

Naval Pilots Simulate Carrier Takeoffs, Landings in Assembling Tactical Data

They may be new planes—but the Navy doesn't grab all it can get. Instead it orders two or three, tests them from every aspect, and only then orders them in quantity, modified by Navy findings. Max B. Cook, Scripps-Howard aviation editor, describes the process today in the last of his articles on Navy preparedness for the war which might come.

By MAX B. COOK, Scripps-Howard Aviation Editor

NAVAL AIR TEST CENTER, PATUXENT RIVER, Md., Apr. 10—At this isolated 880-acre base at the mouth of the Patuxent River, the Navy is proving, testing and evaluating everything it has that flies or is airborne.

It is a vital part of the Navy's plan to assure itself that every bit of equipment that would be used in a war that might come is the latest, best and most efficient tactically that can be produced. It is the \$50,000,000 Naval Air Test Center—and it means just that.

This project answers why Navy has only two or three of several types of new aircraft.

When its test pilots, engineers, electronics experts and others finish with a war plane, the manufacturer usually has several score or more specific modifications to make before production contracts are signed.

As an example, two of the latest fighters recently reached this center.

Fly 24 Hours a Day

One was immediately turned over to the Service Test Division. Its crack pilots began flying it—24 hours a day, simulating all missions and maneuvers performed in combat. Bombing, gunnery, catapult takeoffs and carrier landings were included.

It is estimated that the normal life of a carrier-type fighter is 450 hours. In actual operation, this is spread over a year. The Test Division cuts this to possibly three months on some planes.

The pilots then report how the fighter stood up; how its electronic devices, armament, landing gear, engine, instruments, controls and other equipment worked.

Test Equipment

The second fighter was turned over to the Flight Test Division. It was loaded with all sorts of testing equipment aimed to tell the story of the plane's flying characteristics.

While the first plane's endurance was tested, the second plane went through innumerable tests, including control and stability characteristics, performance, fuel consumption, engine cooling and others.

Meantime, the Electronics Test Division assays the workability of the plane's electronic and electrical equipment. And the Armament Test Division checks, tests and reports on the quality of its guns and cannon. But it is still far from being "through the wringer."

Given Tactical Test

Up comes the Tactical Test Division, which has to perform the tactical air test (best possible and most efficient use in specific types of military operations).

How can this fighter best be utilized in action to accomplish the greatest results in fighting the enemy? That is the question. This division gets the answer after testing the plane out in projects assigned by the Bureau of Aeronautics.

The results of these combined tests should make the taxpayer happy. Hundreds of thousands of dollars are saved through finding weaknesses in construction and equipment which might have been found only—and fatally—in combat.

More is saved in being able to inform the manufacturer of modifications that must be made be-

# NEW, NEW COFFEE!

IT'S THE IMPROVED CHASE & SANBORN... TASTE IT TODAY!

You'll call this glorious new Chase & Sanborn the "finest coffee money can buy!" Vacuum-packed! Get a pound today!



IT'S MY BEST HELP

Roman Cleanser is the favorite washing aid of over a million housewives. It makes dingy clothes snowy-white; removes fruit stains, beverage stains and many other stains. Simple directions for removing various stains and for disinfecting in kitchen, bathroom and laundry are on Roman Cleanser label. Careful mothers use it freely every day.

1 Pint stem  
2 Comparative suffix

### Shrine 6 Sets Installation Date



Emma Leppert, Arch Everett

Archie J. Everett will be installed as watchman of the shepherds and Emma Leppert as worthy high priestess of the Indianapolis Shrine No. 6 at ceremonies to be held at 8 p. m. Apr. 17 in the Claypool Hotel.

Others to be installed are:

Worthy prophetess: Edna Hallowell; associate watchman of shepherds, Harry Gandy; worthy secretary, Agnes Gandy; worthy treasurer, Leslie Sweet; worthy chaplain, Panama Wiles; worthy shepherd, Charles Clegg; worthy guard, Gladys M. Clark; worthy herald, Bill Purcell; worthy man, Mark H. White; second worthy man, George G. Diederich; third worthy man, Violet Ross; organist, Eva Morgan; guardian, Ruth Riley; worthy guard, Nora

Figari.

Icing Not Too Serious

Later, some ice was found at Spartansburg, S. C., but Cmdr. Martin and crew, at last reports, still are trying to find some icing conditions.

Cmdr. Martin today voiced the thought that the icing bugaboo which has canceled out scores of regular airline flights every winter is not that serious at all.

"I do not want to say that icing conditions never develop," he added, "for they do. But I do say that, on our findings, icing is not found as extensively as we have been led to believe. It has been found that, even when icing conditions are present, icing does not always exist."

Aid Commercial Aviation

Cmdr. Martin's findings—and other developments here which might aid commercial aviation—are made available to the airlines as well as to the military. Icing reports aid the manufacturer in planning what type of deicer to use.

With super high speeds in use, electronics have become one of the most vital phases of aerial combat, and Navy planes take this into consideration.

Here at Patuxent, some startling new developments have extended the scope of aerial fighting generally.

In addition, a new system of radio communications allows plane-to-plane and plane-to-carrier communication on many frequencies with no interference. It might best be described as a radio-dial system for it is just that easy for pilot control to utilize it. The pilot dials and gets his radio connection.

Cmdr. G. M. Greene, head of the Electronics Division, also has assisted in the development and testing of a tiny airborne teletype with standard typewriter keys but less than one-third the size and weight of a typewriter. Just as teletypes operate in today's offices, sending and receiving messages over telephone wires from tape, this airborne teletype sends the messages out through the air.

Test Pilot School

An airman, having pounded out a question, simply slips a switch and goes about his business. The reply comes in on a small tape and can be read at leisure. A test proved its efficiency between Patuxent and San Juan, 2000 miles away.

Something new has been added at this Naval Air Test Center—an innovation which may spread to other services. It is a new Test Pilot School, where topflight Navy pilots are thoroughly instructed and trained in test-pilot work.

The best pilots available now are attending six-month courses. They are thoroughly indoctrinated in theory and spend at least three months flying and reporting findings to add the practical touch.

Flying Boats Tested

This Naval Air Test Center has a shore line extending nine miles along Patuxent River and Chesapeake Bay. Every type of flying boat, including the huge Martin Mars, is tested here.

The Navy knows when it finds an aircraft test that it has the latest, best and most efficient plane of its kind that can be obtained, equipped with the best armament and electronic devices. When it is ordered into production, it is not on the obsolescent list.

Brunner and Linn, whose trial will be set later, are charged with the death of Theodore Wolfe, 21, whose body was found in a W. Raymond St. gravel pit last July 12.

In the first hearing last November, Brunner was on trial jointly with Robert C. Linn, 25, of 631 Holly St., on the same charge but the latter asked and was granted a separate trial. The jury in that trial disagreed and a new hearing was ordered.

Brunner and Linn, whose trial will be set later, are charged with the death of Theodore Wolfe, 21, whose body was found in a W. Raymond St. gravel pit last July 12.

Begin Jury Selection For 2d Brunner Trial

Selection of a jury for the second trial of Herbert Brunner, 26, of 820 Division St., on a murder charge in the "gravel pit" slaying case, was started today in Criminal Court 2.

The best pilots available now are attending six-month courses. They are thoroughly indoctrinated in theory and spend at least three months flying and reporting findings to add the practical touch.

Flying Boats Tested

This Naval Air Test Center has a shore line extending nine miles along Patuxent River and Chesapeake Bay. Every type of flying boat, including the huge Martin Mars, is tested here.

The Navy knows when it finds an aircraft test that it has the latest, best and most efficient plane of its kind that can be obtained, equipped with the best armament and electronic devices. When it is ordered into production, it is not on the obsolescent list.

Hours:

Monday and Friday: 9 A. M. to 8 P. M.  
Tues., Thur., Sat.: 9 A. M. to 5 P. M.  
Closed Wed. at Noon

DR. H. C. FAHRBACH  
Optometrist  
302 KAHN BLDG. MERIDIAN AT WASHINGTON

CROSSWORD PUZZLE

French Statesman

Answer to Previous Puzzles

HORIZONTAL: 1. Dress stone; 2. Pictured; 3. French finance minister; 4. Jacob's brother (Bib.); 5. A mammal; 6. Imitated; 7. Assent; 8. Has an em'; 9. Refund; 10. Tranquility; 11. Enclosed; 12. End walls; 13. Sack; 14. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

VERTICAL: 1. Capital of his country; 11. Unclosed; 12. End walls; 13. Enclosed; 14. End walls; 15. Pictured; 16. Sack; 17. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

2. 3. Dress stone; 4. Pictured; 5. French finance minister; 6. A mammal; 7. Imitated; 8. Assent; 9. Has an em'; 10. Tranquility; 11. Enclosed; 12. End walls; 13. Sack; 14. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

3. Dress stone; 4. Pictured; 5. French finance minister; 6. A mammal; 7. Imitated; 8. Assent; 9. Has an em'; 10. Tranquility; 11. Enclosed; 12. End walls; 13. Sack; 14. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

4. Dress stone; 5. Pictured; 6. French finance minister; 7. A mammal; 8. Imitated; 9. Assent; 10. Has an em'; 11. Enclosed; 12. End walls; 13. Sack; 14. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

5. Dress stone; 6. Pictured; 7. French finance minister; 8. A mammal; 9. Imitated; 10. Assent; 11. Has an em'; 12. Enclosed; 13. End walls; 14. Sack; 15. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

6. Dress stone; 7. Pictured; 8. French finance minister; 9. A mammal; 10. Imitated; 11. Assent; 12. Has an em'; 13. Enclosed; 14. End walls; 15. Sack; 16. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

7. Dress stone; 8. Pictured; 9. French finance minister; 10. A mammal; 11. Imitated; 12. Assent; 13. Has an em'; 14. Enclosed; 15. End walls; 16. Sack; 17. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

8. Dress stone; 9. Pictured; 10. French finance minister; 11. A mammal; 12. Imitated; 13. Assent; 14. Has an em'; 15. Enclosed; 16. End walls; 17. Sack; 18. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

9. Dress stone; 10. Pictured; 11. French finance minister; 12. A mammal; 13. Imitated; 14. Assent; 15. Has an em'; 16. Enclosed; 17. End walls; 18. Sack; 19. Cereals; 20. Employed; 21. Fancied; 22. Skunk skin; 23. Urge; 24. Earthwork; 25. Fruits; 26. Wrong; 27. Forgive; 28. Dispatched; 29. Simpleton; 30. Venture; 44. Finish; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

10. Dress stone; 11. Pictured; 12. French finance minister; 13. A mammal; 14. Imitated; 15. Assent; 16. Has an em'; 17. Enclosed; 18. End walls; 19. Sack; 20. Cereals; 21. Employed; 22. Fancied; 23. Skunk skin; 24. Urge; 25. Earthwork; 26. Fruits; 27. Wrong; 28. Forgive; 29. Dispatched; 30. Simpleton; 44. Venture; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

11. Dress stone; 12. Pictured; 13. French finance minister; 14. A mammal; 15. Imitated; 16. Assent; 17. Has an em'; 18. Enclosed; 19. End walls; 20. Sack; 21. Cereals; 22. Employed; 23. Fancied; 24. Skunk skin; 25. Urge; 26. Earthwork; 27. Fruits; 28. Wrong; 29. Forgive; 30. Dispatched; 44. Venture; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

12. Dress stone; 13. Pictured; 14. French finance minister; 15. A mammal; 16. Imitated; 17. Assent; 18. Has an em'; 19. Enclosed; 20. End walls; 21. Sack; 22. Cereals; 23. Employed; 24. Fancied; 25. Skunk skin; 26. Urge; 27. Earthwork; 28. Fruits; 29. Wrong; 30. Forgive; 44. Venture; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

13. Dress stone; 14. Pictured; 15. French finance minister; 16. A mammal; 17. Imitated; 18. Assent; 19. Has an em'; 20. Enclosed; 21. End walls; 22. Sack; 23. Cereals; 24. Employed; 25. Fancied; 26. Skunk skin; 27. Urge; 28. Earthwork; 29. Fruits; 30. Wrong; 44. Venture; 45. Scorched; 47. Jewel; 48. Calm; 50. Models; 52. Scolds; 53. Oceans.

14. Dress stone; 15. Pictured; 16. French finance minister; 17. A mammal; 18. Imitated; 1