## Air States Arms

CERTIFICATE

This is to certify that

2nd Lieutenant RALPH L. MINKER JR.

0770722

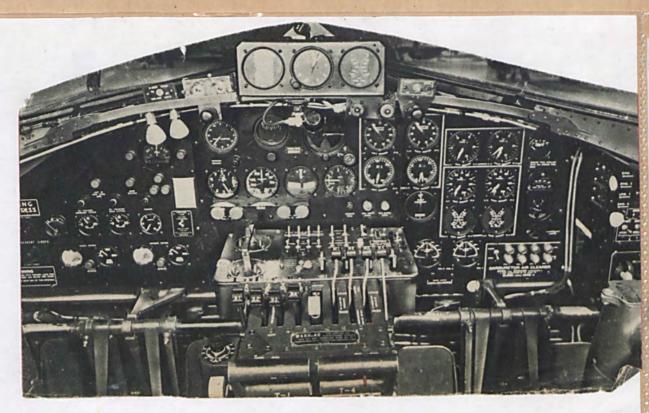
has satisfactorily completed the prescribed course of instruction in

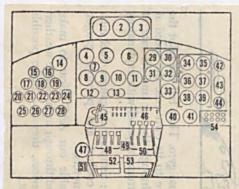
Specialized Four Engine Pilot Training

**B-17 TYPE AIRCRAFT** 

GIVEN AT R.A.A.F., ROSWELL, NEW MEXICO THIS 3rd DAY OF June NINETEEN HUNDRED FORTY FOUR

> JOHN C. HORTON, Colonel, Air Corps, Commanding.





- 1 & 3. Carburetor air temperature gauges.
- 2. Accelerometer. 4. Radio compass
- indicator.
  Turn indicator.
- 6. Artificial horizon or flight indicator.
- 7. Marker beacon.
- 8. Altimeter. 9. Air speed in-dicator. 10. Turn & bank.
- 11. Rate of climb.
- 12 & 13. Prop feather, left &
  - right engines. copilot's oxy

- 14. PDI equipment indicator.
- 15. Bomb doors open. 16. Bomb release.
- 17 & 18. Hydrau-lic pressure warning lights.
- 19. Vacuum warning light. 20. Volt meter.
- 21. Hydraulic pressure emer-gency system.
- 22. Hydraulic pressure system.
- 23. Vacuum gauge.
- 24. Air speed
- source control.
  25 & 27. Pilot's & copilot's oxygen flow indi-
- cator. 26 & 28. Pilot's & COCKPIT AND INSTRUMENT PANEL ON B-17 FORTRESS

- gen cylinder
- pressure. 29 & 30. Manifold pressur pressure, left & right engines.
- 31 & 32. Tachometer, left & right engines.
- 33. Flap position indicator.
- 34 & 35. Fuel pressure, left & right engines.
  36 & 37. Oil pressure, left &
- right engines.
- 38 & 39. Oil temperature, left & right engines.
- 40 & 41. Cylinder head temperature, left & right engines.
- 42. Free air temperature.

- 43. Fuel tank
- gauge. 44. Fluorescent light control.
- 45. Ignition master switch.
- 46. Switch for fuel, landing
- gear, etc.
  47. Auto pilot turn
  control.
  48. Turbo-super-
- charger regulators.
- 49. Lock for mixture controls and supercharger.
- 50. Mixture controls.
- 51. Lock for throttles.
- & 53. Throt-tles. 54. Carburetor air

cleaner.