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### **BIRD GUN TESTS PLANE WINDSHIELDS**

With plane speeds increasing, the risk of a large bird crashing through the windshield and endangering the life of the pilot and all others aboard demands attention. Under the guidance of the Civil Aeronautics Administration, a cooperative scientific study of just what happens to the windshield of a plane when struck at high speed by a heavy bird, is being made by airplane operators, builders and suppliers. The purpose is to learn how to construct windshields that have greater strength against such impact.

The test equipment consists of a high-velocity compressed-air gun. The gun which has two interchangeable barrels, one five inches, and the other ten inches in diameter—both 20 feet long, is connected to a reservoir of air under high pressure. Loaded with an electrocuted chicken or turkey the gun is fired at the test windshield. Velocities far above plane speeds now contemplated, can be achieved.

Approximately a hundred tests have been made, using different speeds, angles of impact, sizes of birds, and types of windshields. Already Civil Aeronautics Association engineers have learned how to increase the impact resistance tremendously. A standard transport plane windshield broke when struck by a four-pound bird at a speed of 75 mph. The latest windshields tested withstood the impact of a four-pound bird at 300 mph., and of a 15-pound bird at over 200 mph.