

THE SAGA OF THE FAIRCHILD AT-21

by Kent A. Mitchell

Ask any aircraft history buff to name a 1940s vintage aircraft made of wood and which caused a Congressional investigation—the inevitable answer will be the Hughes *Spruce Goose*.¹ However, another aircraft shares earlier but similar credentials: the Fairchild AT-21 *Gunner*. While this aircraft design did fare better than that of Hughes by at least making it into production, it too suffered as a victim of circumstances and an ultimate ignominious fate. It is also a classic example of what can happen to a perfectly good airplane because of a lack of governmental direction or decisiveness.

Originally conceived as the Fairchild Model M-77 in 1940 as an all-wood, twin-engined, advanced bomber crew trainer, the design subsequently became known as the AT-13, AT-14, and then the AT-21. There was also a very secret (at that time) version, the XBQ-3, an unmanned controllable bomb, which was a highly modified radio-controlled AT-21.

BACKGROUND—As the United States geared up for the ultimately enormous Second World War effort, it was evident that certain material supplies (aluminum) would soon become critically short. Coincidentally, Fairchild had been involved for several years with processes to fabricate aircraft

components utilizing plastic-bonded laminated plywood veneers. (The culmination of those efforts at that point was the construction of a sole prototype aircraft, the Fairchild F-46. Details of this aircraft may be found in the Spring 1974 *Journal*.)² Known as the *Duramold* process, very thin sheets of birch were laminated with glue under heat and pressure to form bonded plywood panels and structures—basically similar to fiberglass and other composite fabrication methods used today. In addition to the metal-conserving advantage of this method of construction, the laminated wood provided a very smooth, rivet-free, low-drag external aircraft skin. Another touted advantage was that if the occasion arose, structural repairs could be accomplished in the field with relatively simple woodworking tools. Then too, fatigue and corrosion problems would be nonexistent. However, disadvantages inherent with the process were to be discovered later during production. In the final production version, the AT-21 aircraft was approximately 85 percent wood and only 15 percent metal.

The Army expressed interest in the M-77 design and on March 6, 1941, asked Fairchild for a quotation to build one experimental model of the plane. Subsequently, a contract

The Fairchild AT-21, powered by Ranger V-770-11/15 engines.

(Photo by Lyle S. Mitchell)



was agreed upon to produce an aircraft designated as the XAT-13, powered by two 600-hp Pratt & Whitney R-1340-AN-1 *Wasp* radial engines. The \$325,380 contract allowed for an optional second aircraft. This option was exercised in April, but was for an aircraft powered by 520-hp Ranger V-770-3 inline engines and was to be designated as the XAT-14. The contract Change Order No. 1, dated April 17, was the beginning of what were to be many which would plague and hinder the aircraft throughout its lifetime. However, the basic aircraft (as conceived) was designed to gross at 12,000 pounds, fly at 200 mph, carrying a crew of six. It was also to carry ten 100-pound practice bombs, and be equipped with a power-operated gun turret atop the aft fuselage. The tricycle landing geared monoplane had a mid-mounted negative gull wing.

The first flight of the prototype (the XAT-13) was conducted on a Sunday, July 19, 1942, as reported by Fairchild test pilot Vance Breese:

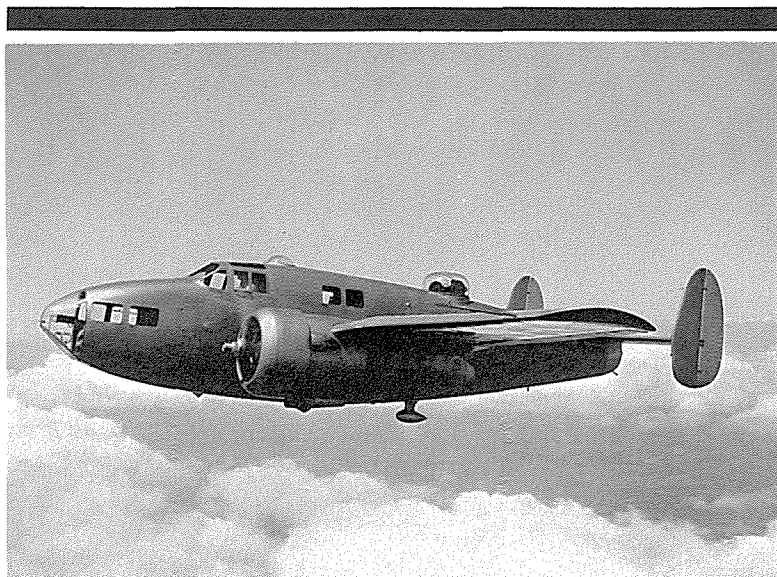
"Takeoff was normal, flaps up, tab setting neutral at 90 I.A.S. The gear was left extended throughout this flight. Rudder forces were light and rudder effective. The roll in yaw excessive. The ailerons were light and effective. The elevators were light and effective at speeds from 75 to 140. A slight buffeting was observed in the tail at 140 I.A.S. There was excessive movement of the radio antenna which may have caused the movement of the tail. The landing was normal. The approach made at 105 I.A.S. Landing approximately 85 I.A.S., power off."³

The tail buffeting experienced on the first flight was to be a recurring problem, as was recorded on the second flight made the same day: "Wheels were retracted shortly after takeoff, operation normal. There was no great change in trim when the wheels were retracted. There was some buffeting observed at speeds above 140 and at 160 the tail moved approximately 1.5 to 1.75 inches at the stabilizer tip."⁴ Otherwise, the aircraft flew well and was considered to be a successful design with only the to-be-expected minor problems with a prototype—and the constant flow of engineering change requests which required much "hangar time" to incorporate.

Six flights were made with Vance Breese as pilot in the period July 19 to the 26th. On flight No. 3 on July 21st and No. 6 on the 26th, Richard A. Henson, the company chief test pilot, rode as copilot. On August 11th, Henson made his first flight as pilot and from then, all test flights of the XAT-13 were made by him until its delivery to the Army.⁵

Fairchild had submitted a quotation to build 75 AT-13 aircraft plus spare parts and received a fixed-price contract (W-535-ac-22236) from the Army for \$3,723,825 on October 31, 1941. This production effort was to be squeezed into the existing manufacturing facilities at the Hagerstown, Md., plant, which was operating at near capacity building the UC-61 (military F-24) and PT-19 trainer aircraft. However, early in 1942 the Army awarded Fairchild another AT-13 production contract for 400 planes and enough spare parts to build another 60! This contract (W-535-ac-25806), for \$19,653,693.20, cost plus-fixed fee, called for aircraft deliveries of up to 40 per month. Needless to say, it was obvious that more production space was needed. Now came the familiar, "I'm from the Government, and I'm here to help you!"

On recommendation from the Army, Fairchild negotiated



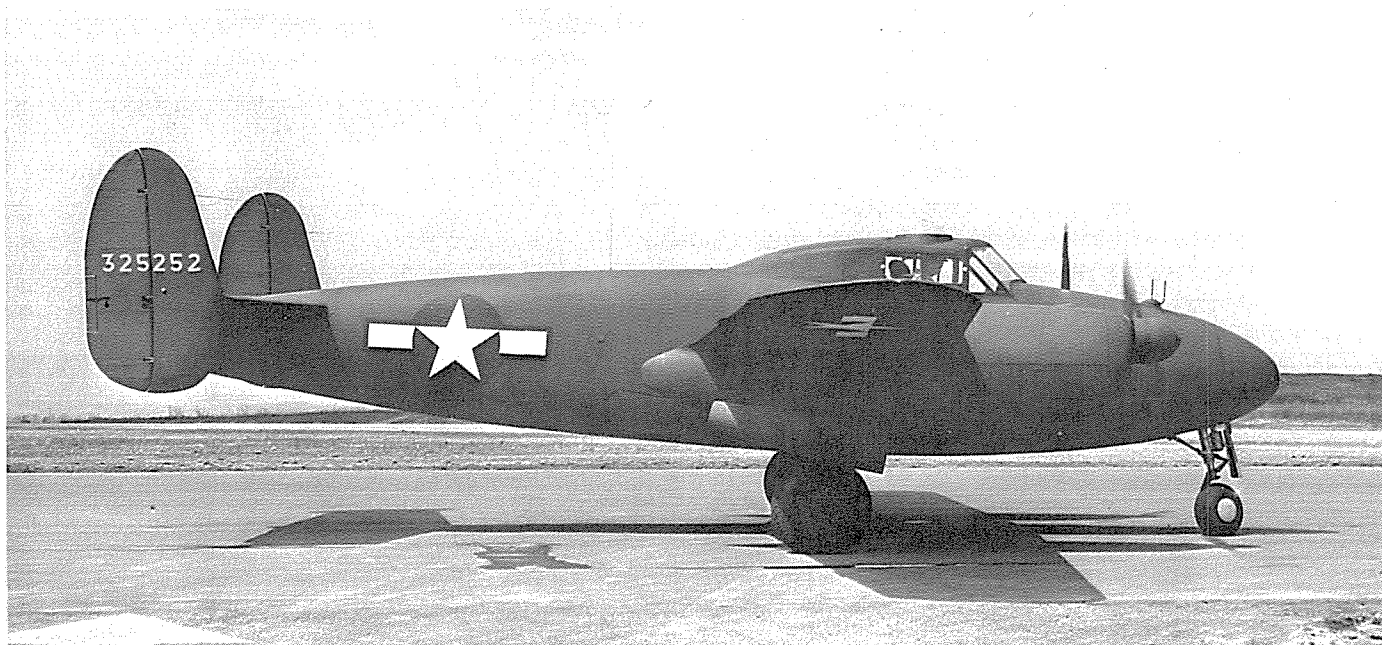
The Fairchild XAT-13, powered by P&W R-1340-AN-1 engines. Only one was built. (Fairchild Aircraft Photo #176)

a lease between the Defense Plant Corporation, a corporation created by the Reconstruction Finance Corporation to aid the government in its National Defense Program, for a plant at Burlington, N.C. The plant, formerly occupied by the Crown Rayon Company, was located not too far from Hagerstown in an area where labor was plentiful and the building did not appear to need too many alterations. April 1942 saw the start of the conversion of the plant to aircraft production by local building contractors and the transfer of key personnel from Hagerstown to set up the factory organization.

Meanwhile, back at Hagerstown, the Army continued to request numerous changes to the XAT-13 prototype which began to impact cost and down-stream AT-13 production schedules. While many changes were minor, some (changes to systems such as the bombsight and the autopilot, installation of a navigator's dome, installation of a gun camera, and use of alternate structural materials) required extensive revisions to detail and assembly drawings, bill of material, parts list, drawing list, wiring diagrams, checking by weight and stress departments, and the issuing and cancellation of numerous blueprints to Wright Field, production, inspection, purchasing, subcontractors and vendors. Of major concern were delays incurred due to the difficulty in procuring strategic materials. For instance, only a few days after Fairchild submitted their original cost and delivery schedule quotations to the Army, the Office of Production Management issued directives severely restricting the use of aluminum, magnesium and copper.

On October 6, 1942, the XAT-13 was presented for inspection to the AAF Engineering Inspection Committee at Hagerstown who promptly recommended 106 more changes to be made prior to delivery! Upon incorporation of the changes, the aircraft was flown to Wright Field on October 31.

Production AT-13 aircraft, now popularized as the "Yankee Doodle," were initially scheduled to have the first built and delivered from Hagerstown until the Burlington assembly line could be fully established. The Hagerstown schedule called for the first delivery to be one aircraft in Janu-



The Fairchild XBQ-3, a highly modified radio-controlled AT-21.

(Fairchild Aircraft Photo #6685)

ary 1943, two in February, three in March, and four in April—the remaining AT-13 aircraft to be delivered from Burlington. This was not to be.

Due to the numerous changes, material shortages, and production delays, it became apparent that the schedules could not be met. In addition, labor costs per aircraft increased 30 percent to 28,600 manhours. Much labor was expended in rework of parts and tools.

Establishing production at Burlington was progressing slowly. The first production part, a control rod, was fabricated on October 10, 1942. By the end of the month only 25 production employees were on the job.

The Ranger SGV770C-1 powered XAT-14 made its first flight on November 25, 1942, and was completely successful. Vance Breese was again the pilot for the first test flight. The second flight, made December 2, and subsequent test flights were made by Dick Henson. A short time later, in December, the Army requested that the Pratt & Whitney powered prototype XAT-13 be converted to a Ranger V770 powered AT-14A configuration.

Now the Army began making changes in earnest. The basic purpose of the XAT-14A aircraft was first to be changed from a *bombing crew* trainer to that of a *bombardier* trainer, then next to a *gunnery* trainer! This caused the immediate issuance of “stop-work” orders and “back to the drawing board” for many engineering changes.

Next, the Army announced that it had been decided that Bellanca Aircraft Corporation of New Castle, Del., and McDonnell Aircraft Corporation of St. Louis, Mo., would also build the aircraft, under license from Fairchild.

Then, the Army announced that the production aircraft would now be known as the AT-21 instead of AT-14 and would be called the “Gunner.” Those aircraft built by Fairchild would carry the basic model designation of AT-21, those built by Bellanca would be the AT-21 BL, and the McDonnell aircraft would carry AT-21-MC.

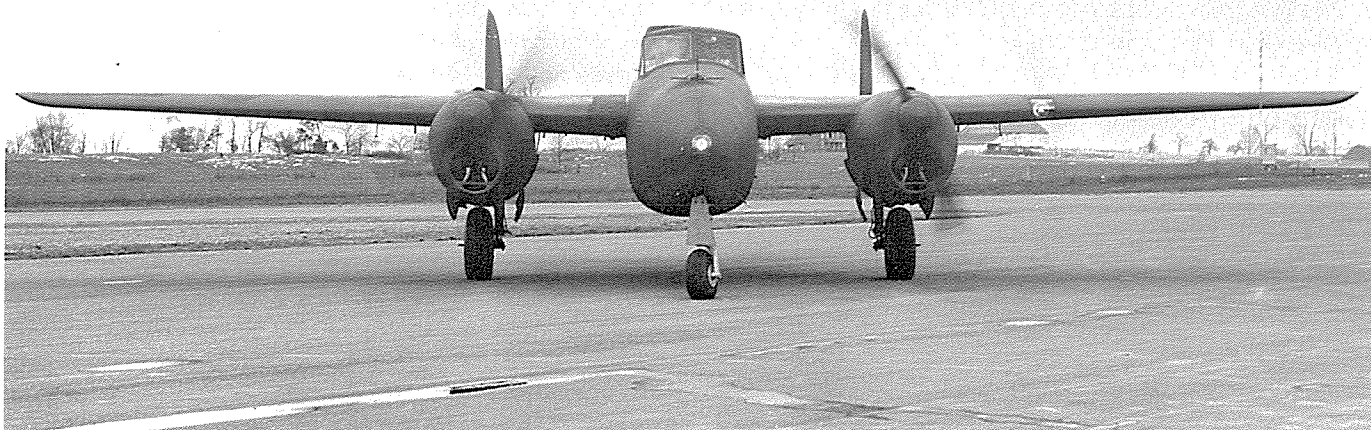
Concurrent with the AT-21 production activities, two experimental radio-controlled flying bombs were built using

the basic AT-21 structure. Termed the XBQ-3, they had a range of nearly 2,000 miles, flew at altitudes of 17,000 feet and carried one 4,000-pound bomb. At first considered a counter to Germany’s buzz bombs, they were never used in combat.⁶ Because of its then-classified nature, very little literature can be found describing this aircraft, known to Fairchild as its Model M-79. The 1947 *Jane’s* devoted only three sentences to it. With the almost all-wood structure and dark paint scheme, the XBQ-3 must have been the granddaddy of the new “Stealth” aircraft. Comparing photographs shows that, versus the AT-21, the XBQ-3 had no wing dihedral.

PRODUCTION PROBLEMS—At the outset, production at the Burlington plant was besieged with problems. First noticed was the great lack of skilled personnel, which required the formation of numerous training classes. Initially, many new-hires at Burlington were sent to Hagerstown for training. Soon, training classes were instituted at Burlington and nearby Greensboro in inspection procedures, layout, welding and blueprint reading. Later classes added to the program included sheet metal and woodworking. Ultimately, approximately 50 employees per month were receiving their “Training Within Industry” certificates.

Now, with “trained” people on the job, various other problems began to surface. First was the lack of adequate tooling. Due in part to the Army’s constant requests for changes to the airplane and the shortage of design personnel, the fabrication of fixtures and jigs could not keep pace with production requirements. Consequently, a large percentage of the tool manufacturing was subcontracted. Next, difficulty was experienced obtaining good glue joints—especially in the wing spar areas. This problem was to such an extreme that the first two aircraft required tear-down to remove the rear spars and replace the spar webs. Overall resolving of this problem held up production for five weeks.

Soon apparent during initial production efforts, even to outside visitors to the plant, was the enormous amount of hand fitting of parts on almost every assembly. Instead of



Straight-on view of the XBQ-3 showing almost no dihedral.

(Fairchild Aircraft Photo #6686)

employing commonsense woodworking practices, the airplane was being built as if it were made of metal. *Also, only ONE center-section jig was built and available for use on the assembly line!* Almost all parts were worked and then reworked by hand. Numerous workers were seen with gluepots and woodworking tools reworking bomb bay doors, nacelle doors, nose wheel doors, etc., to obtain a satisfactory fit. It was also observed that pinked tape was being applied with a brush instead of an applicator box, which had been used to speed up the process by almost all other aircraft companies for many years. Wet sanding of the wood fuselage sections was being done by hand instead of utilizing power sanders. Likewise, rubbing compound was being applied by hand instead of by available automotive-type power-polishing tools. Overall, it was apparent that the *Duramold* process was not suited for high-volume production line schedules—especially with insufficient tooling and inexperienced workers.

Then, a new element was introduced—labor relations! Because of production delays, reduction of work forces in some departments were high, “inefficient” employees were being terminated plantwide, and the Selective Service was taking its toll. Employee complaints surfaced and disputes arose over who did what work where. Consequently, in a National Labor Relations Board election held on July 1, 1943, the UAW-CIO Local 210 won the right to organize and bargain. Contract negotiations began on August 12. However, after 13 meetings the company and the union were unable to agree on a contract (by the end of September). At the last two meetings, a representative of the U.S. Conciliation Service was present which resulted in the recommendation that the NLRB assume the role of mediator. Relations with the union then continued but there was no further progress toward negotiation of a contract throughout 1943. Eventually, on July 10 of 1944, the company signed its first (and only) contract with the union, after a full year of very difficult negotiation.⁷ During this period employee morale was very low, for both labor and management.

The chief engineer left, for health reasons, and was re-

placed by the assistant chief engineer. The production management office changed hands. The superintendent of outside production resigned and was replaced as was the manager of subcontracting. Personnel changes in inspection were very high. Many of the employees resigned (a peak of 85 in December) due to their concern that they had not received wage increases. Finally, the employment manager was discharged for drunkenness and alleged familiarity with the wives of other employees. Disgruntled, on the way out he told management that he would “report the company” to the House Military Affairs Committee. He did.

In addition to the complaints from disgruntled ex-employees, local public opinion in and about the town of Burlington became critical of Fairchild operations.

The combination of low morale, Army requests for configuration/engineering changes, tool problems, parts shortages from subcontractors, and numerous supervisory/management personnel changes all resulted in an obvious decline in production efficiency.

Meanwhile, Fairchild continued flight testing of the prototype (vibration difficulties experienced on the first flights were corrected by installation of fillets between the wing and engine nacelle installations) and the Army was busy changing the AT-21's mission once again (the fourth time) to that of an “advanced pilot,” or pilot “transitional trainer,” which would be the AT-21A. In addition, this time looking ahead, the Army directed that Fairchild perform engineering studies for the requirements to convert the plane into a UC (light utility cargo) type personnel transport.

The first production AT-21 aircraft (production No. R-101) was complete at Hagerstown and was being prepared for delivery to Wright Field. Burlington's first production plane (R-102) was test flown on August 31, 1943, and the second (R-103) on September 27.

With the completion of the Hagerstown R-101 unit, all production tools were shipped to Burlington in the first part of November. Burlington was scheduled to deliver six aircraft in December—impossible, due to the engineering changes,

tooling problems, and the dependence on subcontractors to deliver major items such as aft fuselages, cowling, and landing gears. In spite of existing contract deliveries not being met, on November 4, 1943, the Army approved Supplemental Agreement No. 13 to the contract adding *another* 250 airplanes to the 475 AT-21s already on order!

At the beginning of December 1943, the production status of the AT-21 looked like this:

Production Serial No.	Percent Complete	Production Serial No.	Percent Complete
R-101	100%	R-108	85%
R-102	(Delivered)	R-109	58%
R-103	(Accepted)	R-110	43%
R-104	100%	R-111	15%
R-105	70%	R-112	14%
R-106	100%	R-113	8%
R-107	99%	R-114	5%

In summary, after two full years of "production," only two AT-21 airplanes were in the Army's possession at the end of 1943.

THE CONGRESSIONAL INVESTIGATION—Due to pressures imposed by reports made by Army investigations and personal complaints from labor and local businessmen, both U.S. Senator Robert R. Reynolds and Congressman Carl T. Durham of the House of Representatives became involved with the Burlington situation. Senator Reynolds requested factual details from Fairchild which were furnished by Cecil Brown, personnel director, and William P. Sharpe, public relations director. Congressman Durham received reports from two investigators assigned to Burlington by the House Military Affairs Committee. These two investigators, Wendell R. Blackburn and Joseph Colgan, spent 10 or 12 days in the Burlington plant and arrived at the same conclusions that the Army investigators and Fairchild themselves presented. The basic outstanding facts, as appeared on the surface, were:

1. Production was delayed because the first 75 planes were not built at Hagerstown as originally planned but were moved to Burlington where the plant and organization were not ready.

2. The airplane was new and contained a number of "bugs."

3. The airplane was fabricated by the new *Duramold* process with which there was no previous experience to draw upon.

4. The Army Air Force constantly changed the model design.

Everything duly considered, it was readily apparent that Fairchild was a victim of circumstances, many of which were government imposed, and that a high-level "investigation" would serve only to reaffirm the facts and was therefore unnecessary. However, the momentum created by external pressures could not be attenuated and a Congressional hearing was scheduled and held before the Special Committee of the Committee on Military Affairs on December 8 and 9, 1943. The Special Committee met with Philip J. Philbin (D-Mass.) presiding as acting chairman with Representatives Andrew J. May (D-Kentucky), and Forest A. Harness (R-Indiana). Also present were Rep. Carl T. Durham (D-North Carolina),

H. Ralph Burton, General Counsel for the Committee, and Joseph Colgan, Special Investigator.

Four men testified the first day—three disgruntled former Fairchild personnel who complained of employee idleness, insufficient supervision and inefficient Army supervision—and Grenville R. Blackburn, an investigator for the Military Affairs Committee, who said that during his 10-day visit to the plant he witnessed lack of production, idleness of employees, and a high scrap rate.⁸

The hearing did not go unnoticed by the press and, there being more interest in headlines rather than facts, declared: "FAIRCHILD PLANT SPENT MILLIONS, MADE ONE PLANE" and "Two Years of Inefficiency and Waste Are Charged at Burlington, N.C., Unit."⁹

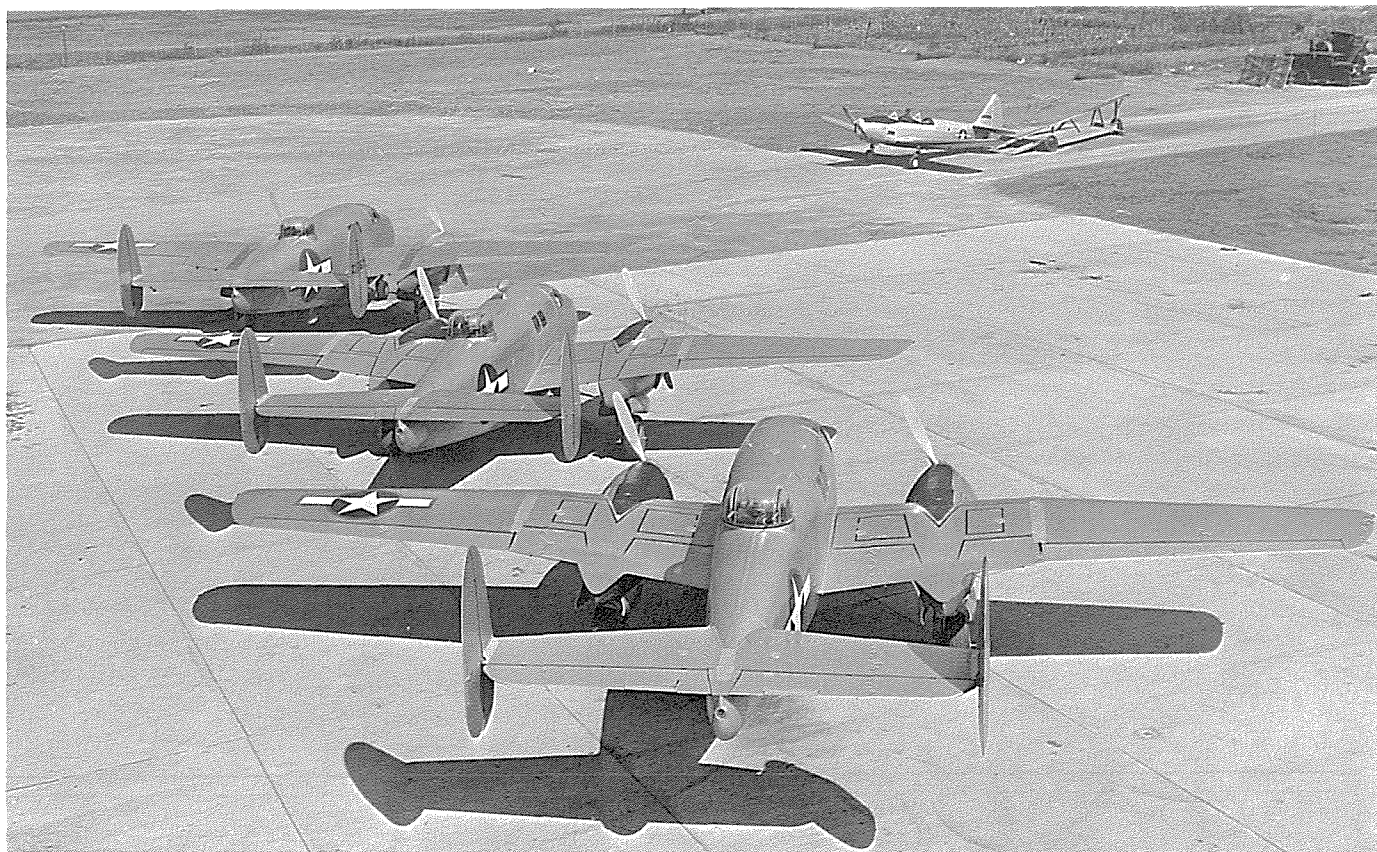
The Committee reconvened December 9 with John M. Costello (D-Calif.) presiding as acting chairman. The second day of the hearing again produced accounts of worker idleness by an ex-employee and Milton G. Nottingham, an investigator for the House Military Affairs Committee. However, Fairchild was now given the opportunity to present the management's viewpoint of the situation.

Lee H. Smith, general manager of the Burlington plant, testified as to the "true" production figures, and the obvious reasons for production delays. Then came the *piece de resistance*. In an outstanding presentation (complete with charts), J. Carlton Ward, Jr., the president of the Fairchild Engine and Airplane Corporation, turned the hearings around—showing that Army indecisiveness and personnel problems rather than Fairchild management precluded a high production rate of the new airplane. Mr. Ward pointed out to the committee that the Army called for unrealistic schedules for production which called for completed airplanes before they (the Army) had even decided the *type* of plane to be made! Of no small importance, Mr. Ward noted, were the impossibilities of geographically locating an airplane factory in a remote area and expecting local workmen with little or no skills to mass produce wood airplanes using a new process with which no one in the industry had much experience.

The committee was suitably impressed by Mr. Ward's testimony . . . and thereupon closed the hearing. Three members of the committee were quoted in the transcript of the day's testimony. Rep. Harness: "I think Mr. Ward has done a marvelous job here of clearing up some things we had in our minds as a result of this first hearing. It looked bad to me." Rep. Costello: "Mr. Ward . . . is not only the kind of a man who can clear up anything of that kind, but he has done a good job." Rep. Philbin: "I think he has made an excellent statement."¹⁰

Now the press, the very same press which only the day previous had lambasted Fairchild, exclaimed in headlines, "'Marvelous Job,' Inquiry Finds, In Criticized Fairchild Air Plant!"¹¹

The findings of the committee's investigation were published and stated, in part: "That it should have been apparent, from knowledge and experience gained during the present emergency by the Army Air Forces . . . that such a schedule . . . could not be fulfilled, particularly in view of the fact that the type of airplane contemplated was still in an experimental stage" and "That results of this inquiry . . . definitely reflect a lack of proper super-



This rear view shows the slight reverse gullwing of the AT-21. The lead aircraft carries tail No. 211675; the others have not been identified.

(Photo by Lyle S. Mitchell)

vision and efficient follow-up on the part of the Army Air Forces. . . '12

The *American Aviation* magazine of January 1, 1944, in an unusually harsh and critical editorial, absolutely blasted the Congressional investigation, the *Washington Post* newspaper, politicians, and the people of Burlington, N.C. Because of its somewhat unique outspokenness and because it summarily "says it all," the editorial is repeated here in its entirety.

INCIPIENT FASCISM

We have just witnessed another shabby spectacle of an aircraft manufacturer being made a goat in a Congressional investigation that hits a high point for undemocratic and unfair treatment.

Without any warning to company officials, a House military affairs subcommittee blazed forth in December with the biggest hunk of erroneous and jaundiced charges the capital has seen in a long time. The Washington Post in a sorry piece of journalism came forth with a front-page headline that Fairchild Aircraft, Inc., of Burlington, N.C., had spent \$13,000,000 and only one plane had been produced. Shocking! Scandalous! Wasteful industry milking the taxpayer! Hang the wastrels!

The next day the House subcommittee "generously" agreed to hear several Fairchild officials tell "the other side" of the story. Then the "investigation" was quickly dropped and Fairchild was given a fine send-off and the well wishes of the committee. But the newspapers buried these facts and the damage to a fine aircraft company had been done. Cheap? The episode is one of the

worst on record and the Congressmen involved should be well ashamed of their abuse and irresponsible regard for their positions as leaders of American people.

Here is the story in brief, and it is worth remembering because there will be other tawdry incidents before the war is over and forgotten.

Fairchild was told to build a new plant for war purposes. Fairchild did not pick the site. Fairchild was told to go to Burlington, N.C., and if you've ever been there you never in the world would choose that section of North Carolina for a specialized industrial development such as aircraft manufacturing. It isn't even on a main line, highway or railroad. The people of that area, good Americans though they are, have never worked in highly skilled factories. There wasn't a trained man in a carload. It was a gosh-awful place for an aircraft factory.

What happened in due course was more or less inevitable. The civic leaders of Burlington that had wanted the plant and who gave assurance of their support in the war effort, began to be disturbed by the economic dislocations such a plant produced. More than this, they hadn't the faintest conception of what is involved in an aircraft program. Fairchild underwent many change orders. Even models were discontinued. In all of the flux of an emergency aircraft program many workers were idle some of the time, but they couldn't be fired because such money had been spent in training and they would be needed in due course. Through it all Fairchild was not to blame except that company officials were too busy to "soft soap" the Burlington citizenry and explain in detail what was taking place, provided the citizenry of Burlington could have understood at all.

So Burlington, getting weary of the war in which its interest had not been too deep and sacrificial, began writing to Congressmen, especially its own Congress-



Fairchild "Gunner" Trainer

MODEL AT-21

MANUFACTURED BY THE DURAMOLD PROCESS, DEVELOPED BY FAIRCHILD, THIS NEW GUNNERY TRAINER IS POWERED BY TWO RANGER ENGINES OF 520 HP. EACH. ITS FUSELAGE IS FULL MONOCOQUE AFT OF THE CENTER SECTION, AND THE FORWARD PORTION IS SUPPORTED INTERNALLY BY A WELDED STEEL TUBING TRUSS. WINGS ARE OF TWO SPAR WOOD CONSTRUCTION WITH WOOD RIBS. COVERING OF WINGS AND FUSELAGE IS OF PLASTIC-BONDED VENEERS, MOLDED TO SHAPE BY THE DURAMOLD PROCESS. THIS SPEEDS PRODUCTION AND MINIMIZES THE USE OF STRATEGIC MATERIALS.

PROPELLERS—Hamilton Standard constant speed, diameter 9' 1"

PERFORMANCE at 12,000 feet (estimated):

High Speed—300 mph

Cruising Speed—184 mph (57% pt.)

Climb—1,040 ft. per minute

Service Ceiling—20,400 feet

Normal Range—736 miles

WEIGHTS

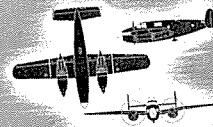
Gross Weight—8,745 pounds

Max Weight—8,000 pounds

Max Loading—31-35 lbs. per sq. ft.

Power Plant—Two Rangers, each 12 cylinders, inverted, in line, air-cooled, 520 hp. (500 shaft hp.)

SPECIFICATIONS



Dimensions

Span—57 feet

Length—37 feet 7 1/2 inches

Height—15 feet

Wing Area—379 square feet

Construction

Fuselage—Wood bulkheads, covered by Duramold (molded veneer) plating, structural steel tube from forward of fuselage section to rear fuselage.

Wing—Wood spars, ribs, etc., covered by Duramold plating.

Landing Gear—Tricycle type, retractable, selective hydraulic brakes.

Fuel Capacity—225 gallons



Fairchild Aircraft

HAGERSTOWN, MARYLAND BURLINGTON PLANT BURLINGTON, NORTH CAROLINA



FAIRCHILD AT-21

Fairchild AT-21 publicity specification sheet.

(Author's Collection)

man. The charges were fantastic, suitable for fairy tales. The Congressmen, thinking always of the next election, became suitably outraged and in due course some investigators whose knowledge of aircraft building was limited to picture magazines, snooped around gathering "evidence" and listening to the chronic complainers of the town. Did they interview high company officials? Certainly not! They lurked in corners, entered through back doors, listened only to what was music to their ears.

So one fine day out pops the Congressional investigation after giving Fairchild officials a few hours' notice. Out poured the charges which made wonderful newspaper reading. No Fairchild official was given a single opportunity in advance of the publicity to answer the charges. Nothing that ever happened in Spain or Italy or Germany or any other fascist-minded nation ever topped the procedures against Fairchild. But when the Fairchild people did get to talk, the committee members quickly withdrew. The charges were pure and simple political baloney. They collapsed like a pricked balloon.

It's simply another instance of a city letting down an industry it wanted and proving that its interest in wanting the factory was selfish from the outset. It's simply another instance of a Congressional subcommittee using disgraceful and undemocratic means and abusing its rights to conduct investigations. The Truman Committee in the Senate has never gone to such low extremes in all of its uprooting of waste in production. Perhaps the

people of Burlington on reflection may see that they were not good Americans in throwing mud unjustifiably against a solid and good industrial concern and perhaps a few Congressmen who stooped too quickly to politics may reflect that they are supposed to represent the best interests of the people and the nation.

Exonerated, Fairchild could now return to the business at hand—building airplanes. During early 1944, production AT-21s were being placed in service at Randolph, Vandalia, and Patterson army fields as well as being flown at Hagerstown, Burlington, and at the McDonnell and Bellanca plants. It was said that the planes were "enthusiastically received" by flying personnel and it appeared that the plane would be the most successful of all advanced trainer types.

PHASEDOWN—The number of personnel employed at Burlington peaked at 2,910 in April 1944, having started with only 43 in June of 1942, and the plant was gearing up for full production. However, someone in the Army circles "leaked" information to union personnel at Burlington that a production stop order was coming. Fairchild management, when confronted by the union with this information, disclaimed any knowledge of any such action. Then, a telegram from Wright Field was received by Fairchild on April 26 (followed by letter April 28) in which the contract for AT-21 airplanes for 725 was cut back to 168. The effect on morale at Burlington was

understandably bad, but in spite of the situation the plant delivered eight aircraft for the month instead of only the scheduled six. Delivered were production numbers R-124 through R-131. The contract cutback created a new production schedule which called for the completion and acceptance of all remaining planes by December 31 of 1944.

Coincidentally on April 26, the day the cutback telegram was being received, a landing gear failure on production R-116 occurred at Hagerstown and forced a belly landing which caused extensive damage to the airplane. Worse than the damage was the embarrassment, for the passenger list included Armand Thieblot, chief engineer of Fairchild Aircraft, Major J.T. Semans, the resident AAF representative, and Fairchild's chief test pilot, Richard A. Henson. (The author still has a 6x12-inch piece of the *Duramold* belly skin torn from the plane.)

During May, Fairchild realized that the production cutback caused many problems in that the airplane delivery rate would have to be greatly and rapidly increased and then suddenly tapered off while, at the same time, the company would have to cancel approximately 80 percent of the subcontract and procurement efforts. Partly as a result of Fairchild's request, the number of planes to be completed was again reduced from 168 to 146. Ten airplanes were accepted by the Army during May (R-132 through R-140 and R-142). In June, the Army received 12 airplanes (R-141, and R-143 through R-153). The July schedule called for 15 airplanes and 16 were accepted (R-154 through R-169).

Then in August, the bottom fell out at Burlington. Someone (again) from the Army leaked information to the local union officials that the AT-21 program was canceled! Confronted with this on August 10 by the union, Fairchild management denied any knowledge—as indeed neither they or the AAF resident representative had received any such notification. Morale, already low from strained employee-management relations experienced during the Congressional investigation and union contract negotiations, fell even further. On August 11, an Army public relations officer (Lt. Herbert Baus) called Fairchild to say that cutback was forthcoming and that he would furnish further information when he got it.

The following day, August 12, Baus called again to read a draft press release and a proposed message that could be given to the employees concerning a cutback—still unofficial. Fairchild did not think such an “unofficial” announcement was necessary since by now the union had informed all of the employees, the local papers, and the entire Burlington community. Other than the rumor mill which was running at full speed, production efficiency dropped and employee versus management complaints and bickering degenerated to the personal level.

This situation reached a pinnacle on August 14 when the Burlington plant's general manager returned to the facility after dinner and cursed at a group of employees. Incensed, the employees immediately contacted their union officers and it was made known that all work would cease until some personnel changes were instituted by

the company. With that, some of the other company management people telephoned the division General Manager (Richard S. Boutelle) at Hagerstown and explained the situation. The Burlington plant manager was immediately relieved of command and had to remove his belongings from his office late that night.

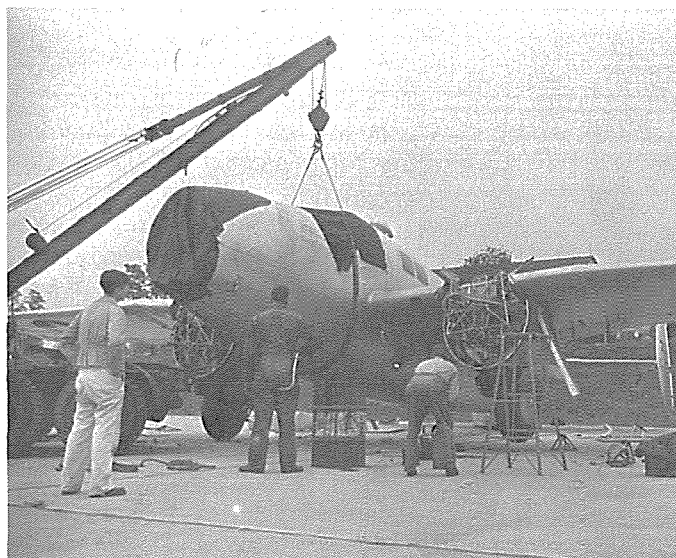
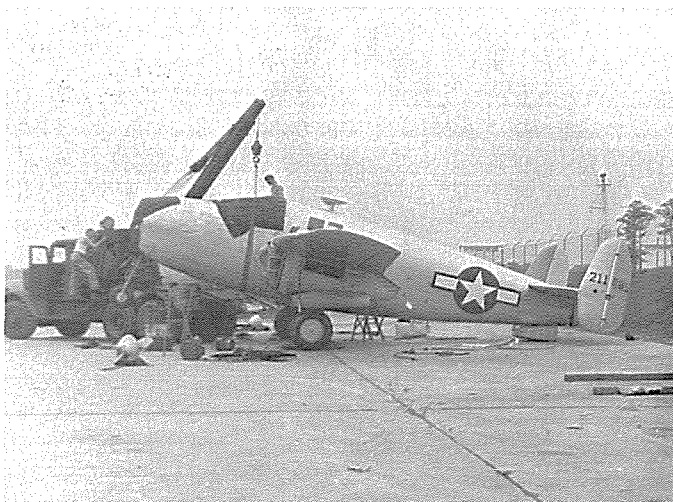
Finally, on August 16, Fairchild received telegram notification from Wright Field that the AT-21 production schedule would be cut to a total of 106, including the prototype and the static test airplane. This meant production at Burlington would cease in October 1944 instead of December. This also meant that the last airplane would be production R-205—already through the paint shop! The immediate result was the layoff notification to 555 production and 159 non-production workers—causing a new problem.

Because of the recently signed union contract (the previous month), probationary employees would be released first and then all other employees by seniority. However, due to the nature of aircraft production, the most recent hires were at the end of the line in final assembly and would be laid off first—but this was where the company needed those particular experienced people most—so they could complete the production contract. Fairchild attempted to arbitrate with the union concerning approximately 100 men who the company wanted retained as final assembly men, regardless of seniority, to maintain an orderly production flow to completion. The union flatly refused to cooperate, saying that the company did not give a notification soon enough for any desired change of plans. It was stated that the union knew the details of the impending contract cutback and, therefore, the company certainly should have also and planned accordingly in a timely manner. The company's account papers of this situation stated, “The jam in which Fairchild management was placed by the aforementioned circumstances was naturally embarrassing all around, highly detrimental to morale of both management and labor, detrimental to continued production, and prejudicial to relations between the company and the Army.”¹³

September was utilized to effect the stop-work orders, cancellation of in-process work at subcontractors and vendors, completion of tooling processing and records, and the layoff or transfer of personnel to inventory duties. Documents and drawings were packed and shipped to Wright Field. The airplane delivery schedule for the month was *not* met, the Army accepting only 12 versus 19 required per contract.

During October inventories were progressing, termination claims from subcontractors and vendors were processed, and materials were surplus and disposed of. The shipment of spare parts was stopped and those already on the way were returned for disposition. The completion and Army acceptance of the last airplane (R-205) occurred on October 18.

Termination proceedings continued through November and by the end of the month 75 percent of the inventory schedules were complete and submitted to the Army. By direction, all special tools and master fixtures



Dismantling No. 211695. Fire axes and wood saws were used on this airplane at Hagerstown.
(Photos by Lyle S. Mitchell)



were scrapped and sold. All work in process items were scrapped and any remaining raw material was shipped to the Metals Reserve and to other aircraft manufacturers.

In December, Fairchild notified the Defense Plant Corporation that it desired to vacate the Burlington plant and almost immediately a new tenant was making arrangements to move in. Firestone Tire & Rubber Company had a prime contract from the U.S. Army to manufacture 105mm howitzers and 90mm antiaircraft cannon and needed a facility.

The beginning of 1945 saw the completion of all inventory schedules and the release of all but 24 personnel at Burlington . . . and 19 of those were eventually dismissed or transferred to Hagerstown by the end of July.

And so, the saga of the Fairchild AT-21 came to a close. Asking the rhetorical question, "What if" the AT-21 had continued in production and had been allowed to see the service for which it had been designed—would it have been known as a good airplane? Apparently it had good flying characteristics, was very serviceable from a maintenance standpoint, and probably would have performed very well as a training plane. However, due to the Army's indecision as to the plane's purpose and the fact that "war-weary" bombers returning from Europe were being pressed into service as trainers, a long history of AT-21 service never came to pass.

What became of the built airplanes? Well, records are scant. Apparently none is in existence today. The fates of two airplanes are certain: The XAT-14 prototype airplane had been declared excess and, while en route to Stinson Field for storage, was damaged in a landing accident at Carlsbad, New Mexico, and was surveyed.¹⁴ The accompanying photographs leave no doubt as to the demise of AT-21 tail No. 211695!

EPILOGUE—Current military/government management philosophy is to glean "lessons learned" from situations which have not worked out well. What mistakes were made within the AT-21 program? Fairchild management listed these:

1. Trying to produce a new airplane with new manufacturing processes in a new plant with new personnel.
2. Indecision on the part of the Army as to the final design of the airplane.
3. Having to use subcontractors and vendors who were "leftovers," being the only ones available after giving higher priorities to those producing higher priority airplanes for the war effort.
4. Selection of management incapable of providing confidence to or obtaining cooperation of production personnel.
5. Accepting unrealistic production schedules from the Army that management knew could never be met.
6. Failure to keep the local population informed of reasons for production delays, thereby causing a hurried and ill-advised Congressional investigation.
7. Clumsy handling of the cutback/termination of the AT-21 program which was allowed to leak to employees before proper notification, injuring morale and further

handicapping production.

Were lessons learned? Maybe some were—but then forgotten, for now (40-plus years later) we again are reading about Fairchild's problems with the military and Congress while trying to produce yet another trainer—the T-46A. But, that's another story—and I'll let another aircraft historian follow this one.



AT-21 prototype during flight tests—the only all-wood bombardier/gunnery trainer built in quantity. (R.E. Williams Collection)

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ABOUT THE AUTHOR

This is author Kent Mitchell's second appearance in the *Journal*, the first being the Spring 1977 article, "The Fairchild XNQ-1/T-31 Trainer." That article elicited much reader response and correspondence and inspired one AAHS member, Don Pellegrino of Story City, Iowa, to seek out and obtain the sole remaining T-31 and begin a long and difficult restoration project.

Employed by the Department of Defense, Defense Logistics Agency, Mitchell is currently involved with assuring contractual commitments are met by contractors producing C-5B, F-14A, and T-46 aircraft parts. When not writing about airplanes, Kent divides his time between being amateur radio operator W3WTO and his love affairs with a new Corvette and a like-new 1954 Corvette.