

KREIDER-REISNER AIRCRAFT COMPANY, SHED
(Little Green Shed)
851 Pennsylvania Avenue
Hagerstown
Washington County
Maryland

HAER MD-137-A
MD-137-A

PHOTOGRAPHS
REDUCED COPIES OF MEASURED DRAWINGS
FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

ADDENDUM TO:
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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(LITTLE GREEN SHED)

HAER No. MD-137-A

LOCATION: 851 Pennsylvania Avenue (moved from 9 North Walnut Street ca. 1925),
Hagerstown, Washington County, Maryland

The Kreider-Reisner Shed is located at latitude: 39.654694, longitude: -77.719066. The coordinate represents the center of the shed. This coordinate was obtained on 22 August, 2007 by plotting its location on the 1:24000 Hagerstown, MD USGS Topographic Quadrangle Map. The accuracy of the coordinate is +/- 12 meters. The coordinate's datum is North American Datum 1927. The Kreider-Reisner Shed location has no restriction on its release to the public.

DATES OF
CONSTRUCTION: ca. 1887, 1925, 1943, 2006

PRESENT OWNER: Hagerstown Aviation Museum

PRESENT USE: Historical artifact

SIGNIFICANCE: The "little green shed" survives as the oldest structure associated with aviation pioneers Ammon H. Kreider and Lewis E. Reisner, who formed the Kreider-Reisner Aircraft Company (KRA) in 1926, a year after Reisner moved the former Middlekauf shoe shop to this location. It was at this shed that Kreider and Reisner designed and built the Midget and Challenger airplanes. After winning several national air races, KRA built a reputation for innovative, well-built, affordable sport planes, establishing Hagerstown as an important center of the aviation industry. The shed remained in service even after Kreider-Reisner merged with aviation industrialist Sherman Fairchild and built a modern plant, Fairchild No. 1, right behind it in 1929. Fairchild Corporation grew into a major defense supplier in WW II and ultimately went bankrupt in the 1980s, but the shed survived as a symbol of company's humble beginnings. A team of volunteers disassembled the shed and stored it in the building that replaced it, Fairchild No. 1, in the winter of 2006, in hopes of resurrecting it in the future Hagerstown Aviation Museum.

HISTORIAN: Christopher H. Marston, 2007

PROJECT

INFORMATION: The Kreider-Reisner Shed Recording Project was undertaken by the Historic American Engineering Record (HAER), in cooperation with site owner David Andrews. The drawings and history were prepared by Christopher H. Marston, HAER Architect, with the assistance of John Domingos, Montgomery College. Jet Lowe produced the large format photography. The building was disassembled by a team led by Douglass C. Reed of Preservation Associates, Inc. in 2006. Kurtis Meyers, John Seburn, and Jack Seburn of the Hagerstown Aviation Museum plan to reassemble the shed as a featured artifact in the Hagerstown Aviation Museum.

RELATED

DOCUMENTATION: Kreider Reisner Aircraft Company, Factory No. 1
(Fairchild Aviation Corporation, Factory No. 1), HAER MD-137

Physical History

Charles E. Middlekauf built a shoe shop built at 9 North Walnut St. on the west end of downtown Hagerstown, ca. 1887. It was located ½ block off Washington Street, the National Road, and on the Cumberland Valley Railroad.¹ A simple wood frame structure, it measured 16' across, 30' deep, and 14'-4" high. Sheathed with tongue-and-groove clapboard siding painted green, the shed faced east towards the tracks. The front gable end probably had two openings on the first floor, an entrance door and a display window. There was a 3'-2" x 3'-4" attic window, and the roof gable was boxed in with an 8" rake and 8" wood trim. In the rear were 7'-8" double barn doors with a 3' foot wide door adjacent to it. There were three 3'-2" x 3'-4" windows on the north side. The rear gable had a flush rake board. The 30 degree-angled roof was covered with wooden shingles. The ceiling was constructed of tongue and groove planks, with an opening to the attic, which was used for storage.²

No information could be found on the Middlekauf shoe business, but the property was taken over for railroad expansion by 1918. The west end of Hagerstown had five railroads intersecting in its vicinity.³ Lewis Reisner, a young man who had started Reisner Aero Service, acquired the former Middlekauf shoe shop around 1925.⁴ He had the entire structure cut into two equal pieces with a hand saw and then moved them on a truck through town to a site catty-corner from his parents' house at 12 Belview Avenue, in the rear yard of 851 N. Pennsylvania Avenue. Reisner had the building set down backwards, with the rear garage doors in front, facing east towards a dirt driveway off the street and the Western Maryland Railway tracks, and the former front gable end in the rear, facing a 900' long flying field. When the pieces were nailed back together, they simply nailed sister rafters and studs next to where the sheathing had been cut and nailed the ends of the boards to the new studs. The shed was set on a foundation laid loosely with field limestone, with 2x4 single layer sills. Diagonal tongue and groove flooring was nailed to sawn joist sleepers using wire nails. A new corrugated metal roof was installed to cover the original shingle roof and roof cut.⁵

Soon after moving the shed, Reisner added single story, shallow-roof lean-tos off the back (west) end, and north side, tripling its size. He poured a concrete footing towards the front and installed an engine mount where airplane engines were set up and tested. After forming a partnership with Ammon Kreider in 1926, the company became Kreider-Reisner Aircraft Company. Operations

¹ Multiple sources confirmed date and the original location of the shed: *Randall's General Directory of Hagerstown 1895-96* lists "Chas. E. Middlekauff, Shoemaker, at 9 N. Walnut St." All other sources refer to the original owner of the shed as "Middlekauf," which is how it shall be referred to in this report. A shed labeled shoemaker or cobbler is shown at 9 N. Walnut St. in the 1887 and 1910 Sanborn maps, but not in 1918-25, due to the widening of the Cumberland Valley (later Pennsylvania) Railroad right-of-way, which basically took over Walnut Street. Also, an 1887 *Baltimore Sun* calendar was found in the attic during the disassembly process.

² Douglass C. Reed, "Kreider-Reisner Building: Plan for Disassembly." [Word document sent via email], 8 February, 2006.

³ Railroads shown in the 1910 Sanborn map include the Baltimore & Ohio, Cumberland Valley, Norfolk & Western, Pennsylvania, and Western Maryland. A major rail yard was nearby, part of which is now the Hagerstown Roundhouse Museum. Today Hagerstown is served by CSXT and Norfolk Southern.

⁴ David H. Andrews, letter to author, 10 August 2007. Andrews states that Reisner never actually owned the property, but suggests that Reisner located the shed on its current site as a part of a friendly arrangement with his neighbor.

⁵ Historic construction techniques provided by Douglass C. Reed, email correspondence with author, 8 June 2007.

occurred both indoors and outdoors during this period, utilizing not only the shed but several neighboring buildings as well. Expansion continued as Kreider-Reisner Factory No. 1 (more commonly known later as Fairchild No. 1) was built in the former airfield after Kreider-Reisner merged with Fairchild in 1929. Meanwhile, David H. Andrews (namesake and grandfather of the current owner) bought the property at 851 North Pennsylvania Avenue, which included a house, a barn, and the “little green shed” in 1928.⁶ The shed continued to be leased by the company, but was relegated to a minor storage capacity. During this period the shed’s windows were covered with vertical planking (see figure 1). Around 1943 the lean-tos were removed and the side openings were covered with 4’x8’ scrap aluminum sheets. Interestingly, these sheathing materials were actually templates for the fuselage of the Fairchild XC-82 Packet, a military transport aircraft being developed in Fairchild No. 1 at the time. The rear, west wall was sheathed with metal corrugated siding manufactured by Armco. The shed had returned to its original size of 16’x30’.

The physical appearance of the little green shed did not change for the next sixty years. The elder Andrews’ daughter and son-in-law, Margaret and Howard W. Cramer, who inherited the 0.85 acre property in 1944, rented the shed to the neighboring Noland’s (later Wilson’s) Texaco Service Station during the 1950s. Current owner David H. Andrews purchased it from his aunt’s estate in 1982, and continued to rent it to a contractor. Aware of the shed’s historical significance, Andrews tried for years to have the building saved, but none of the efforts came to fruition. With its future in limbo, HAER documented the endangered structure in the fall of 2004. Finally, after the city building inspector threatened to condemn the building, Andrews worked out an arrangement to donate the shed to the Hagerstown Aviation Museum. Local restoration specialist Douglass C. Reed led a team of volunteers to disassemble the shed in the winter of 2006. Meanwhile Vincent Groh, who had owned Fairchild No. 1 since 1984, bought the property from Andrews in February 2006, intending to use the land where the shed had sat for eighty years as access for the east side of his factory off Pennsylvania Avenue. After the disassembly process was finally completed, the team stored the parts of the original Kreider-Reisner Shed in one of the bays of Fairchild No. 1 for future installation in the Hagerstown Aviation Museum.⁷

Current Description and Disassembly

A simple gable frame structure, the shed’s dimensions are 16’x30’, and measures 14’-4” high from the door sill to the peak. It is still sheathed with original clapboard siding with its original openings on the east and south walls, although the green paint has faded. Most of the flooring and lower wall sills had deteriorated, to the point that half of the south wall started to cave in. The roof looks to be the same replacement metal corrugated roof that was installed in 1925 over the original shake roof. The attic window and boxed gable on the west end (the former front end of the shoe shop) survived beneath the corrugated siding added in the 1940s. The aluminum

⁶ Andrews, letter to author.

⁷ Receipts found in attic reveal some of the post Kreider-Reisner activity: “N. George Wilson, Phone 3666, 824 Penna. Ave. Hagerstown, Md.”, stamped 1952, and a Nabisco snacks order for “Noland’s Texaco, Penn Ave.” no date. Details of the recent history of the shed provided by the final two owners in Andrews, letter to author; and Interview with Vincent Groh, 5 February 2007.

sheets also survived on the north side wall, and are now historic artifacts themselves as patterns from the Fairchild XC-82 Packet (the prototype of the “Flying Boxcar”). These sheets were included with other artifacts found in the attic prior to disassembly in February 2006, inventoried and saved by Kurtis Meyers and John and Jack Seburn of the Hagerstown Aviation Museum (see Appendix I).

Douglass C. Reed of Historic Structures Consultants, a Hagerstown restoration specialist, led a team of volunteers in January-March 2006 in disassembling the Kreider-Reisner Shed, aided by a \$5,000 grant from the Maryland Historical Trust for materials and equipment. The plan was to cut the building into sections, using the original 1925 cut as a starting point, and to store them for eventual reassembly. The team started by clearing vines and debris, then salvaging artifacts, floor boards and joists from the building. After removing the garage doors, they inserted vertical bracing beneath the ceiling, and diagonal exterior bracing on the north wall. On Feb 25, 2006, volunteers spent a full day removing the roof in six parts: two gable ends and four roof panels. Using a sawzall to free the roof from the walls and ceiling, and the team lifted the 10’x 15’ roof panels and slid them down the braced skid, where the panel was strapped to a truck-mounted crane and laid on a trailer. The west gable end (the original front) with eight inches of boxing, proved the most challenging, as 24” depth of the roof was saved with it. During removal, it needed to be sawn multiple times before being totally freed from the structure. The ceiling was removed in two pieces, and the walls were removed in six pieces by a similar process in March. Finally, the team tagged, stacked and stored all the building sections in a bay of Fairchild No. 1.⁸

History of Kreider-Reisner Aircraft Company

The origin of the company was 12 Belview Avenue in north Hagerstown, where teenager Lewis E. Reisner and his brother Henry attempted to build an airplane in their parents’ basement in 1916.⁹ From 1917-20 Lewis worked part-time after school with aviation pioneer Giuseppe Ballanca at the Maryland Pressed Steel Company on Pope Avenue in Hagerstown, where Ballanca began developing his CD and CE biplanes.¹⁰ Having gained experience from Ballanca and on his own working on airplanes and automobiles, in 1921 Lewis Reisner started Reisner Aero Service Company, a general repair service business dealing largely in surplus planes, engines, and parts, flight instruction and flight service. After moving the shed and enlarging it to 1200 sf, Reisner used the building for repair and storage. The fields behind the shed were used as landing strip, as was typical of airfields in the 1920s. Approximately 250’ wide and 900’ long,

⁸ Reed, “Kreider-Reisner Building: Plan for Disassembly.” See also ““The Little Green Shed,” and What It Contained, Is Saved,” *The New Pegasus* 1, no. 2 (Fall 2006): p. 25-27.

⁹ The 1922 *Hagerstown Directory* lists Lewis and Henry Reisner living at 12 Belview as “students.” *Hagerstown, Maryland Directory 1922-23*. (Hagerstown: Hagerstown Bookbinding and Printing Company, 1922).

¹⁰ The factory at 909 Pope Avenue still stands. It was part of Victor Products prior to WW II, and is now called Pope Avenue Industrial Park. Only two Bellanca CE’s were completed before the company went broke in 1920 following the post-World War I loss of military contracts. Bellanca references are found in: Bob McKelvey, “Hagerstown Plane Co. had Humble Beginning... But Look at it Now!” *The Jefferson Republican*, 14 December 1947, p. 7. Box 39, Fairchild Industries, Inc. Collection (Acc. 1989-0060, 1990-0047). Archives Division, National Air and Space Museum, Smithsonian Institution, Washington, DC.; John Seburn and Kurtis Meyers, *Hagerstown: Remembering our Aviation Heritage* (Greencastle, PA: Vintage Video, 2004); Bellanca chapter in unnamed document, Fairchild Folder, Western Maryland Room, Washington County Free Library, Hagerstown (hereafter Western Maryland Room).

the field was bounded by the Western Maryland Railway and Harlow Tire Company to the east, Angle's Quarry to the south, and New York Central Iron Works and electrical lines to the north. Reisner Aero Service flourished buying used aircraft such as World War I surplus Curtiss Jenny's and restoring them. However, Lewis wanted to get into faster, more maneuverable sport planes and sought to establish a Waco dealership. The Waco 9 biplane, built by Advanced Aviation in Troy, Ohio, was a three-place open cockpit biplane powered by a Curtiss OX-5 engine. Introduced in 1925, it earned a national reputation for dependability for sportsmen. Reisner did not have the capital on his own to be a distributor, but found a partner in a young aviation enthusiast.¹¹

Ammon H. Kreider was born into an industrious family in the shoe manufacturing business in Lebanon, Pennsylvania. The A.S. Kreider Company had six facilities in Pennsylvania and Maryland, including two in Hagerstown.¹² After spending several years in the family business, Kreider yearned for adventure and started getting interested in airplanes. He received his pilot's license in 1923, and undoubtedly got to know Reisner from business trips to Hagerstown. With his financial backing, business knowledge, salesmanship, enthusiasm, and skill as a pilot, he took the opportunity to buy into Reisner Aero Service. They incorporated the Kreider-Reisner Aircraft Service as a Waco dealership in 1926. Kreider became the salesman of the operation, and took Waco's barnstorming through the region, showing off both daredevil maneuvers as well as allowing potential customers to fly. The partners also looked to enter races with a plane of their own design.¹³

Hearing that the National Air Races would be held at Model Farms as part of the Philadelphia Sesquicentennial in September 1926, Kreider and Reisner decided to build a new model to enter. Kreider teamed with Frederick Seiler, an engineer from the Philadelphia Naval Aircraft Factory, to design the KRA Midget. Seiler provided sketches and layouts, a basic blueprint of the wing and fuselage, and rough stress and performance analyses, but details were worked out over the phone. After most of the work was completed in the Kreider-Reisner Shed and the nearby Harlow Tire Company building, the plane's components were shipped to Philadelphia for final assembly the day before the race. On 12 September 1926, after an initial test flight, Kreider won the Scientific American trophy with a speed of 94.493 mph. Using a Wright-Morehouse 29 hp engine, the Midget was the first low-wing, full-cantilever plane ever flown successfully in the U.S. Also competing in a modified Waco 9 biplane, Kreider won a total of six medals at the

¹¹ Waco Aircraft Company, also know as Advance Aircraft Company until 1926, manufactured sport planes in Troy, Ohio from 1922 until 1964. Ray Brandy, "The Waco Story," *Sport Aviation* (August 1969), p. 18-21. Box 40, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI. Kurtis Meyers, "The Reisner Aero Service," Hagerstown Aviation Museum.

¹² A search of Sanborn maps shows the A.S. Kreider Co. Shoe Factory, Apartments, and Feed Mills in Lebanon in 1925; an A.R. Kreider & Bros. Hosiery Mill existed in a different location in 1912. The Kreider family's Hagerstown Shoe and Legging Co. had both a "Stitchdown Plant" at 136-142 W. Franklin St., and a "McKay Plant" at 36-40 W. Antietam St. See Sanborn Maps of Hagerstown, Maryland and Lebanon, Pennsylvania, 1910-51; Richard A. Alvey, III, *Wings Over Hagerstown* (Baltimore: A. Hoen & Company, Inc. 1939), p. 24.

¹³ The 1925 *Dayton Air Race* newspapers found beneath floor boards of the shed during disassembly are evidence of Kreider-Reisner's interest in air races. Kurtis Meyers, "Ammon Kreider – The Man With the Helmet and Goggles," Hagerstown Aviation Museum.

National Air Races events, quickly earning Kreider-Reisner a reputation in the aviation community.¹⁴

Fresh from their success in Philadelphia, Kreider-Reisner began to receive inquiries about when they would have their own commercial aircraft available. KRA first recommended a number of changes in aircraft design and construction to the Waco 9. After being turned down by the manufacturer, the Advance Aircraft Company in Troy, Ohio, Kreider and Reisner decided to build their own airplanes. Kreider and Seiler teamed together again, and began to develop the C-1 Challenger prototype in May, 1927. Like the Waco 9, the C-1 Challenger was a 3-place, open-cockpit biplane powered by a Curtiss OX-5 engine. After testing the C-1 and flying it to events around the mid-Atlantic, Kreider came back with 115 modifications to make before putting the Challenger into production for the sportsman pilot market.¹⁵ The C-2 Challenger's first flight was 22 June 1927, and KRA built nine models by the end of the year. The biplane's fuselage framework was built of welded chrome-molybdenum steel tubing, covered with cloth. The engine was completely cowled in. The wings were built up of solid spruce spars and built-up duralumin ribs, covered with cloth. A vertically-mounted radiator sat high above the motor just below the upper wing. The wings had four ailerons, controlled through the lower wing with vertical elevators to the upper wings, said to have improved controls over the Waco. The Challenger offered seating for three, with the pilot sitting in the rear. To handle the rough fields typical for landing in the day, it had sturdy landing gear with three struts, and a tail skid beneath the substantial horizontal stabilizers and well-rounded rudder.¹⁶

During Kreider-Reisner's first period of prosperity in 1928-29, the company was bursting at the seams to meet demand. The early Challengers were designed and built inside and outside of the Little Green Shed, which was only 1,200 sf. KRA expanded by utilizing several existing adjacent buildings. In addition to the larger (but derelict) Harlow Tire Company building, just to the south along the flying field, KRA leased the Hagerstown Retining and Plating Company Building. A 50'x100' building used for the production of galvanized milk cans, it sat just across the Western Maryland Railway tracks. The company was building three planes a week in these buildings in May 1928. A contemporary description of production at Hagerstown proclaimed, "In this one-story, 5,000-foot structure [Hagerstown Retining and Plating Co.], the company housed its major

¹⁴ "Interview with Blair Lee Stallings," 8 February 1966. Box 39; "Interview with Mrs. Bitler," 11 February 1966. Box 40, Fairchild Industries, Inc. Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; Erastus Long Austin, *The Sesqui-Centennial International Exposition* (Philadelphia: Current Publications, Inc., 1976). [Excerpt from book online] accessed 16 February 2007, available at: <http://books.google.com/books?id=egCY3gLeOtUC&pg=PA299&lpg=PA299&dq=austin+erastus+long+the+%22sesqui+centennial%22+international+exposition+national+air+races&source=web&ots=fEu1GuR7AI&sig=VfhAo4SzMjfY8esID9pnlG2dLy8#PPA299,M1>

¹⁵ Kreider's tour in 1927 included airfields in Baltimore, Philadelphia, Teterboro, Pittsburgh, Cleveland, Columbus, Boston and other sites in New England. He often let customers pilot the C-1 themselves to get their feedback. Untitled history of the FC-2 and KR C-2, ca. 1977. Box 40, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; Kurtis Meyers, "Production Begins at K-R," Hagerstown Aviation Museum.

¹⁶ Kreider continued his racing and barnstorming exploits to market the C-2 Challenger. For example, on 6 October 1928 Kreider won the OX-5 Race at Bellanca Field outside Wilmington. Letter from Theron Rinehart to Joseph P. Juptner, 31 October 1966; "Interview with Mrs. Bitler," 11 February 1966. Both in Box 40, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; Joseph P. Juptner, "ATC #19 K-R "Challenger," C-2 (KR-31)" in *U.S. Civil Aircraft Series* Volume 1 (Blue Ridge Summit, PA: TAB Aero, a division of McGraw-Hill, Inc., 1993), p.61-63.

mfr. operations: fuselage construction, engine build-up, wing fabrication and aircraft assembly. Fabric covering of the fuselage and wings as well as the doping and hand-rubbing operations were accomplished in the original frame building [Kreider-Reisner shed] except on those bright summer days when the weather permitted these operations to be carried on in the open air.” Chief engineer Fred Seiler and his two draftsmen worked out of a small unpainted adjacent wooden structure. Parts were stored in some neighboring one-car garages behind the tracks off Belview Ave. At its peak, the total workforce was 125 employees.¹⁷

By mid-May 1928, KRA had leased Wood’s Garage at 805 Pennsylvania Avenue, a two-story brick structure that previously housed an automobile dealership. Used for fuselage construction and assembly, office and drafting room, it added another 10,000 sf. With a total working area of nearly 27,000 sf in four buildings, Wood’s now “formed the core of the production complex, and almost all mfr operations, other than wing construction and doping, were concentrated in this bldg.” Indeed, period photos show “Kreider-Reisner Aircraft” with a Challenger logo painted on the roof of Wood’s Garage. This expansion increased Challenger production to eight planes a week; a total of 111 Challengers were constructed in 1928.¹⁸

Even as Kreider-Reisner negotiated expansion, their assemblage of buildings was still only a temporary solution. As production increased, the field behind the shed quickly became inadequate for flying and storing and delivering completed aircraft. After negotiations with the city for a new airfield failed, Kreider-Reisner managed to purchase 60 acres of farmland from Robert & Emma Brumbaugh in April 1928, 4 miles to the north on U.S. Route 11. Here, away from the houses and businesses surrounding their current operation, they built a wood frame 67’x72’ hangar, with room for two 1500’ long landing strips. After the hangar was built, KRA shipped completed fuselage and wings to the airfield by truck, and the Challengers received final assembly, testing and delivery from the company hangar. This tract later became the Hagerstown Municipal Airport and would set the stage for further expansion of the Fairchild empire.¹⁹

During this period Kreider-Reisner started attracting the attention of Sherman M. Fairchild, who was building his own aviation empire on Long Island. Impressed with KRA’s exploits at national racing events, Fairchild purchased a Challenger C-2 to test his Fairchild-Caminez engine. The Challenger impressed Fairchild, as it was the only plane that did not rattle when flying with this rough-running engine. Fairchild also became enamored with Ammon Kreider and the Kreider-Reisner company. This relationship ultimately led to a merger when Kreider and Reisner needed the capital to expand due the demand for the Challenger, which was projected for 500 aircraft in

¹⁷ “Interview with Blair Lee Stallings,” Box 39; “Interview with Mrs. Bitler,” 11 February 1966. Box 40, Fairchild Industries, Inc. Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; 1928 *Aviation* magazine description, quoted in “Three KR-31 Biplanes Produced Weekly,” *Fairchild World*, 27 September, 1981, Western Maryland Room.

¹⁸ “Kreider-Reisner Company’s Added Facilities To Double Production of Challenger Planes,” *Aviation*, June 4, 1928, p. 1623. Box 41; “Plant #3,” [blueprint]. Box 41, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; Seburn and Meyers, *Hagerstown: Remembering Our Aviation Heritage*.

¹⁹ The lender for this purchase was D. Webster Groh, the grandfather of Vincent Groh, who would come to own both Fairchild No. 1 and the Little Green Shed. “Airport Tract,” p. 24. Box 41, Fairchild Industries, Inc. Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; Kent A. Mitchell, “The Hagerstown Airport,” *American Aviation Historical Society Journal* 48 no. 3 (Fall 2003): p. 215-216. [Article online] accessed 12 March 2007, available at: http://www.flyhagerstown.com/pdf/AAHS_V48N3_2003_Hagerstown_Airport.pdf

1929. Fairchild Aviation Corporation purchased Kreider-Reisner on 31 March 1929. With the capitalization of the Fairchild merger, Kreider-Reisner broke ground for a new factory of 32,000 sf, to be built directly behind the original shed at 1 Park Lane (see HAER MD-137). However, only four days after Fairchild announced the merger at a dinner for aviation industry at the All-American Aircraft Show in Detroit, Ammon Kreider was killed in a midair collision. Despite this tragic loss, Kreider-Reisner Factory No. 1 was completed in only four months, and the company ultimately produced 185 Challengers (renamed KR-31 and KR-34) by end of 1929.²⁰

Subsequent History 1929-44

Following the construction of the Park Lane factory, the shed remained standing as Kreider-Reisner Aircraft Co. grew and became Sherman Fairchild's only aircraft manufacturing unit following a reorganization of the Fairchild empire. The Kreider-Reisner Aircraft Co. remained the manufacturing subsidiary of Fairchild through 1936, as the company rebounded from the Depression with new models such as the F-22 and F-24. The Kreider-Reisner division was finally renamed the Fairchild Aircraft Corporation in 1934-5, thus officially removing Kreider and Reisner's names after fifteen years of phenomenal growth.²¹ Through this time, the Little Green Shed was only used a storage shed, but it was often heralded as a symbol of the company's humble beginnings.²²

Ammon Kreider left a larger than life legacy, and it was a credit to Sherman Fairchild and Lewis Reisner that the company survived despite his sudden death. Kreider was buried at his hometown in Annville, Pennsylvania on April 16, 1929, at a ceremony complete with a flyover of three Challenger airplanes. Lewis Reisner, who had remained a vice-president at Fairchild since Kreider's death, left the company in 1936. He first went to Stinson Aircraft and then became a founder of the Tennessee Aviation Corporation, which he ran until his death in 1949. Lewis' younger brother, J. Henry Reisner, remained with Fairchild as production manager until 1939, when he left to become a salesman with Aeroquip Corporation of Michigan. Henry Reisner worked there until his death in 1957. Lewis and Henry Reisner supervised the construction of over 750 airplanes from twenty-three different models during their years in Hagerstown.²³

²⁰ On 13 April 1929, Kreider rode a new KR model C-6 for a demo flight. Another pilot took off in the same direction, never seeing Kreider, and both pilots were killed in a mid-air collision. Theron K. Rinehart "How it all began... fifty years ago: Sherman M. Fairchild "Discovered" Local Airplane Company and Bought it in 1929," *The Cracker Barrel* (March 1979), p. 17-19, Western Maryland Room; also mentioned in Mitchell, "The Hagerstown Airport," p. 218.

²¹ Aerial photos of the factory show Kreider-Reisner Aircraft until 1935. Fairchild Aircraft was painted on the roof by 1936. See aerial photographs, 1927-36. Box 41, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI.

²² Bob McKelvey, "Hagerstown Plane Co. had Humble Beginning... But Look at it Now!" *The Jefferson Republican*, 14 December 1947, p. 7. Box 39, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI; "Welcome to Fairchild: History of the Fairchild Company" [new employee booklet], 1941, Western Maryland Room.

²³ Theron K. Rinehart, "Aviation Pioneers Here in 1929," *The Cracker Barrel* (March 1979) p. 14. Western Maryland Room; "The Fairchild Airplane: Triumph in Safety Engineering," *Fairchild Aviation News* No. 12 (December-January, 1936-37), p.6. Box 1; "J. Henry Reisner" [obituary], *The Flying A* 8, no. 4 (April 1957): p. 2. Box 1, Kreider-Reisner/Fairchild Collection (Acc.1988-0134) Archives Division, NASM, SI, Washington, DC.

The shed remained on the inventory of the facilities that Fairchild owned or leased through the boom times of World War II.²⁴ After Fairchild developed and won wartime contracts for both the PT-19 Primary Trainer and the C-82 Packet, a transport plane, the company expanded exponentially. These lucrative contracts led to the construction of a new 200,000 sf plant designed by Albert Kahn & Associates, Inc, adjacent to the airport. Needing more space immediately, Fairchild subcontracted with several Hagerstown businesses to keep up with demand for the war effort. Meanwhile, the shed's lean-tos were removed ca. 1944, and the shed was brought back to its original gable shape and size. Scrap sheeting used to sheath the north gable wall, dated 1943, were fuselage and wing templates from the prototype for the Packet, the Fairchild XC-82.

While the shed stood for decades leased by gas stations and contractors, Fairchild Corporation continued as a major defense contractor. Operating from its complex at the Hagerstown Airport, Fairchild finally went out of business in the 1980s. The little green shed survived in its original location until it was donated to the Hagerstown Aviation Museum and moved into Fairchild No. 1 in 2006.

The humble building that represents the birthplace of aviation in Hagerstown now lies in the factory that replaced it during the golden age of aviation. The Kreider-Reisner Shed remains as a symbol of a time when Hagerstown was a major manufacturing city and a leader in the development and production of innovative aircraft. After several generations of aircraft production, all that remains of Hagerstown's aviation legacy are these structures, its modern regional airport, and the people who worked there. Eventually, a variety of historic aircraft built at the Little Green Shed and Fairchild No. 1, along with the reconstructed shed itself, will be enshrined in a new facility as part of the Hagerstown Aviation Museum.²⁵

²⁴ "Fairchild Aircraft Division: Manufacturing, Operations, and Storage Buildings," ca. 1945. Box 70, Fairchild Collection (Acc. 1989-0060, 1990-0047). Archives Division, NASM, SI.

²⁵ Currently the Hagerstown Aviation Museum has a display at Discovery Station at 101 West Washington Street in downtown Hagerstown. Their collection of historic aircraft is stored at the Hagerstown Regional Airport, where they hope to construct a new building dedicated to Hagerstown's aviation heritage. The museum's website, accessed February 2007, is: <http://www.hagerstownaviationmuseum.org>

APPENDIX I: Artifact Inventory

The following is a list of the significant artifacts found mostly in the attic prior to disassembly of the shed in 2006. The aluminum template sheets from the Fairchild XC-82 Packet prototype were used as exterior siding of the north side of the shed from ca. 1943 until its disassembly.

Fairchild Model XC-82 Template Sheets (data stated where legible):

<u>Drawing Name</u>	<u>Drawing Number</u>	<u>Date</u>
“Frame Assembly Fuselage: Main Body Sec. Sta. 179”	No. 78-311152	9/21/43
“___ Wing O Panel Center – Sta. 269.596”	No. 78-132004	5/27/43
“Frame Assembly Fuselage: Rear Sec. Sta. 179”	No. 78-311141	?
Frame Assembly Fuselage: Main Body Sec. Sta. 301.5	No. 78-311108	?
Frame Assembly Fuselage: Side Sta. 301.5	No. 78-31112_	?
“Rib”	No. _____	?
Frame Assembly Fuselage: Top Front Sec. Sta. 695	No. 78-311150	?
“Rear Spar”	No. _____	9/20/43

Airplane Parts:

- wooden wing sections, some dating to Bellanca era (1919), wing ribs and spars
- box of instrument parts from Consolidated Instrument Company, New York, dated 1928
- wooden box stamped “Side Cowl, 2 Pcs No. 8B533001-331, Box 21 of 22.”

Ephemera:

- 1887 Calendar from the *Baltimore Sun*
- Chicago & Alton Railroad Calendar (no date, but in an 1880s style)
- Wabash Route Poster, celebrating “Dearborn Station: The New Wabash Depot in Chicago” [the station was built in 1885]
- *Dayton Journal* newspapers from 1924-25 including one on the 1924 Dayton Air Races, and advertisements for planes for sale
- American Railway Express Co. Waybill Tag (no date)
- “Waco 10,” and “No Smoking, KRA Inc.” hand written graffiti on walls (no date)

Building Materials:

- Alcoa Aluminum packing paper
- National Gypsum Co. “Gold Bond Rock Wool” cardboard (nailed to rear wall)
- “Manku Tape” lid, from Okonite Co., Passaic, NJ
- 3” Leather belt

Auto Parts:

- Goodyear Tire
- Shock absorber box
- Noland’s Garage receipts, 1952
- National Biscuit Co. delivery receipt to “Noland’s Texaco” dated 1952
- Nicodemus National Bank counter check, signed by Adrian A. Noland, dated 1952
- Wilson’s Texaco receipts, 1954

APPENDIX II: Historic Images



Figure 1. Kreider-Reisner Shed, 1942. Note the cut through the center of the north wall still visible from 1925 move. The 1936 main assembly bays of the Kreider-Reisner Factory (later known as Fairchild No. 1) stand in the background. This view is taken just before the lean-tos were removed and replaced by the Fairchild XC-82 templates. Additions to the Fairchild complex in the 1950s obstructed this view (*Courtesy Hagerstown Aviation Museum*).

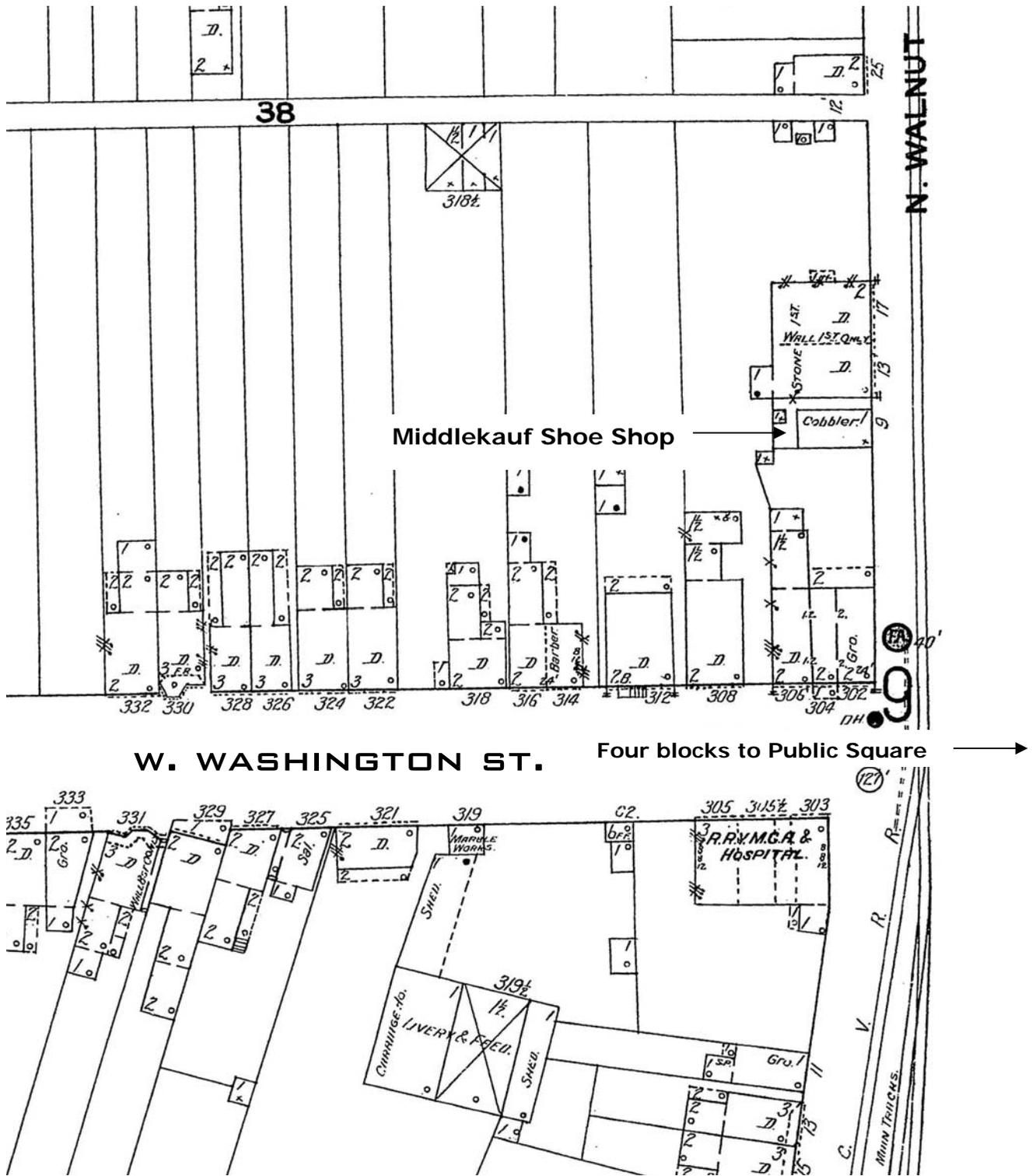


Figure 2. Sanborn Map of Hagerstown, July 1910, Sheet 10. This map shows a “Cobbler” at 9 North Walnut St., confirming the original location of the Middlekauf Shoe Shop. The location is just north of Washington Street (the National Road, Route 40) west of downtown, along the Cumberland Valley Railroad. The right of way is now owned by Norfolk Southern (Courtesy Western Maryland Room, Washington County Free Library, Hagerstown).

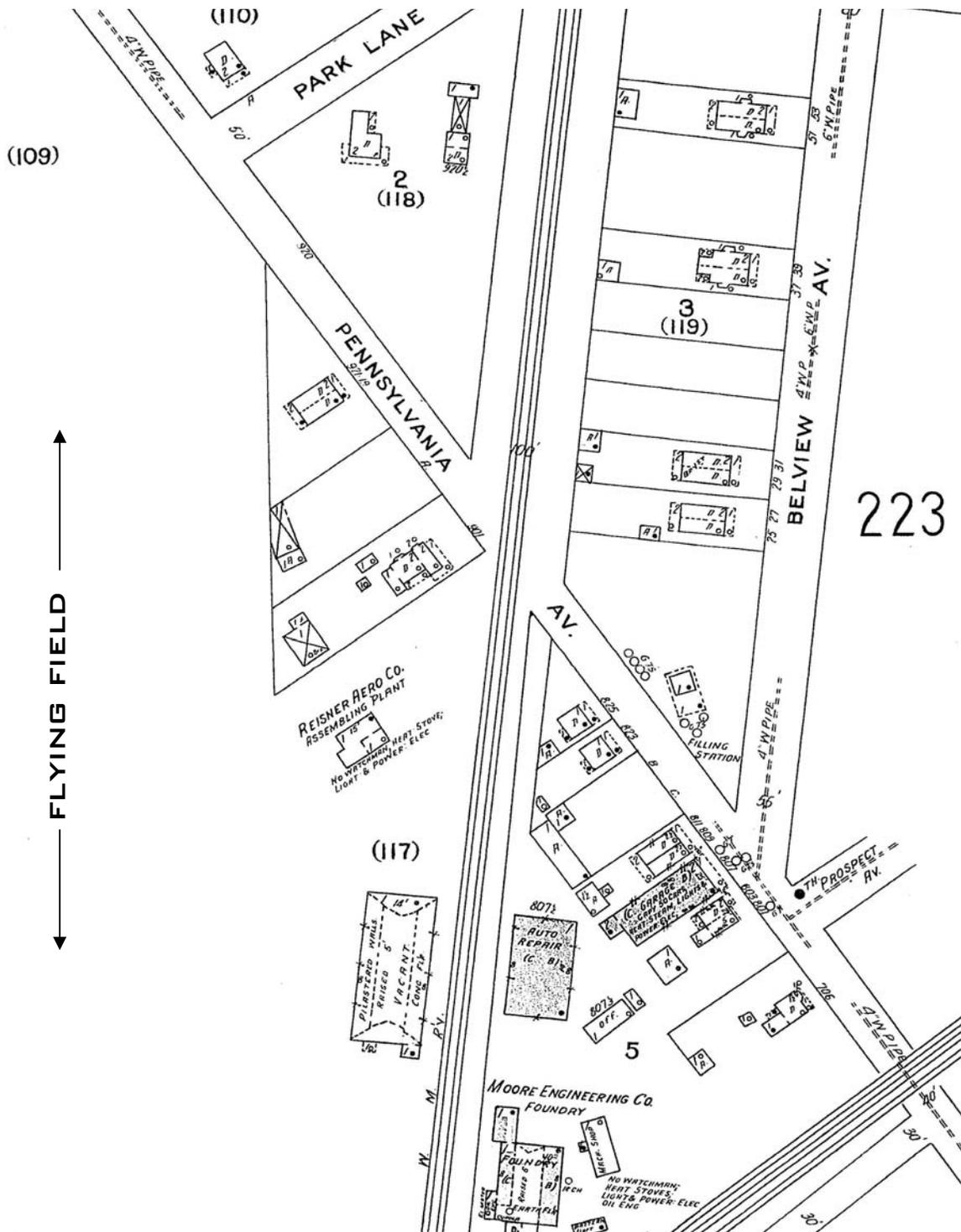


Figure 3. Sanborn Map of Hagerstown, Sheet 229, 1926. The Reisner Aero Co. Assembling Plant can be seen, with its Flying Field to the west. Immediately to the south are three structures that were utilized for expansion: The Harlow Tire Company (“Vacant” building below 117), and to the right of the Western Maryland Railway tracks, the Hagerstown Retinning & Plating Co. (shaded “Auto Repair”), and Wood’s Garage (shaded “Garage”). Compare with aerial view in Figure 10. (Courtesy Western Maryland Room, Washington County Free Library, Hagerstown).



Figure 4. WACO 9 biplanes parked in flying field behind the Kreider-Reisner shed (at right behind tree) and barn (center), ca. 1926 (Courtesy Hagerstown Aviation Museum).

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Figures 5 & 6. WACO advertisement, 1925, and a poster for the National Air Races at the Philadelphia Sesquicentennial, where KRA first achieved notoriety, 1926 (Courtesy Hagerstown Aviation Museum).



Figure 7. Kreider-Reiser Midget wing frame sitting on sawhorses outside of the barn adjacent to the KRA Shed, 1926 (Courtesy of Fairchild via National Air and Space Museum (NASM 9A-05480), Smithsonian Institution).

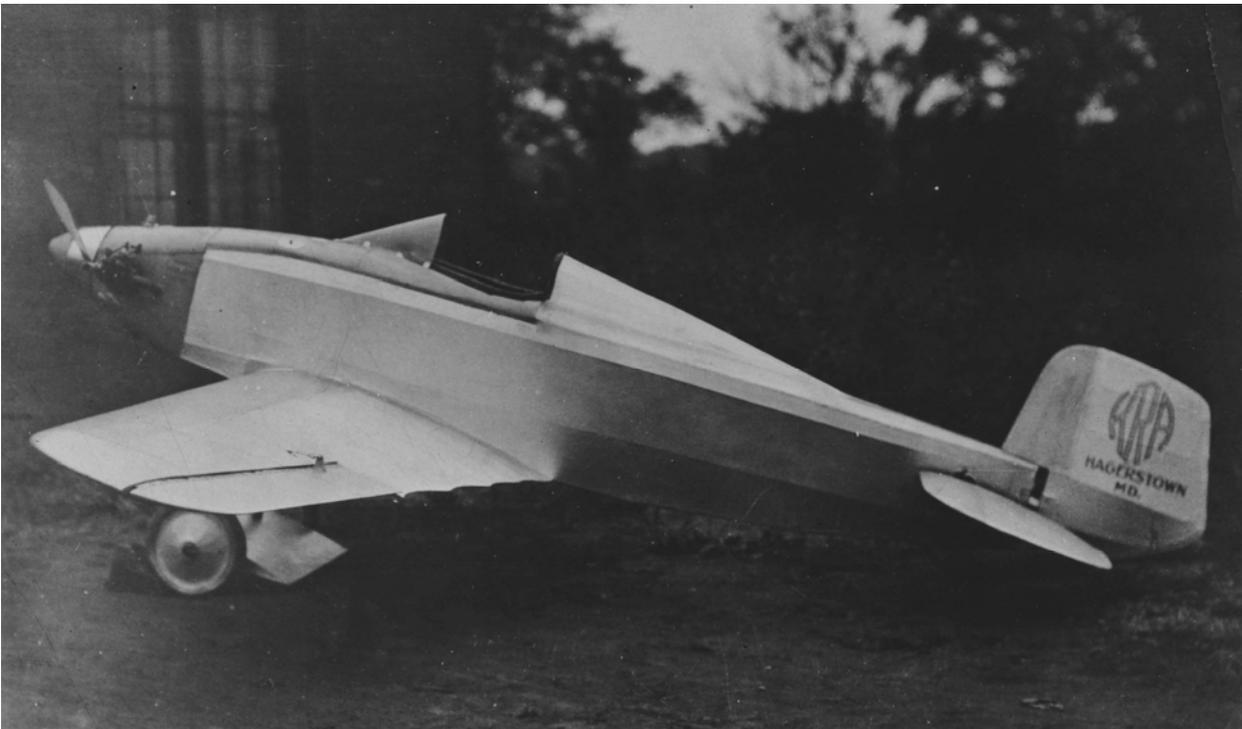


Figure 8. Kreider-Reiser Midget outside of Harlow Tire Company garage, 1926 (Courtesy Western Maryland Room, Washington County Free Library, Hagerstown).



Figure 9. Oblique aerial view of north Hagerstown, looking southeast, ca. 1926. The Kreider-Reisner Aircraft Co. shed is in the center behind the biplanes, the flying field is in the foreground; the barn is to the left, and the Harlow Tire Co. is partially obscured to the right, with lettering on its roof. (Courtesy of Fairchild via National Air and Space Museum (NASM 9A05481), Smithsonian Institution).

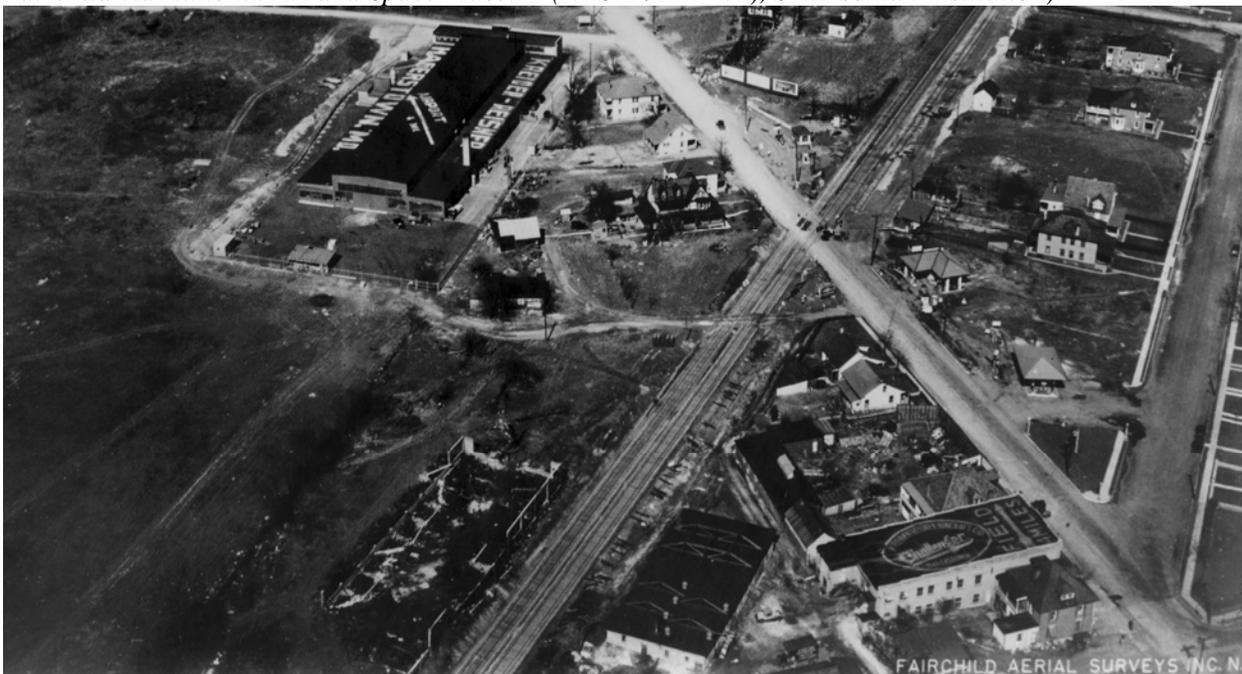


Figure 10. Oblique aerial view facing north, ca. 1930. The new Kreider-Reisner factory occupies the flying field (note arrow to “Airport 4 miles” on roof). The KRA shed sits next to the SE corner fence, behind a tree. In the foreground are the burnt remains of the Harlow Tire garage (left of the tracks), Hagerstown Retinning and Plating Co. (exposed roof trusses), and Wood’s Garage, with “Challenger” painted on roof. (Courtesy of Fairchild via National Air and Space Museum (NASM 9A-05482), Smithsonian Institution).



Figure 11. Crew seen doping wings of the KRA Challenger on saw horses outside of the Little Green Shed, ca. 1927 (*Courtesy Hagerstown Aviation Museum*).

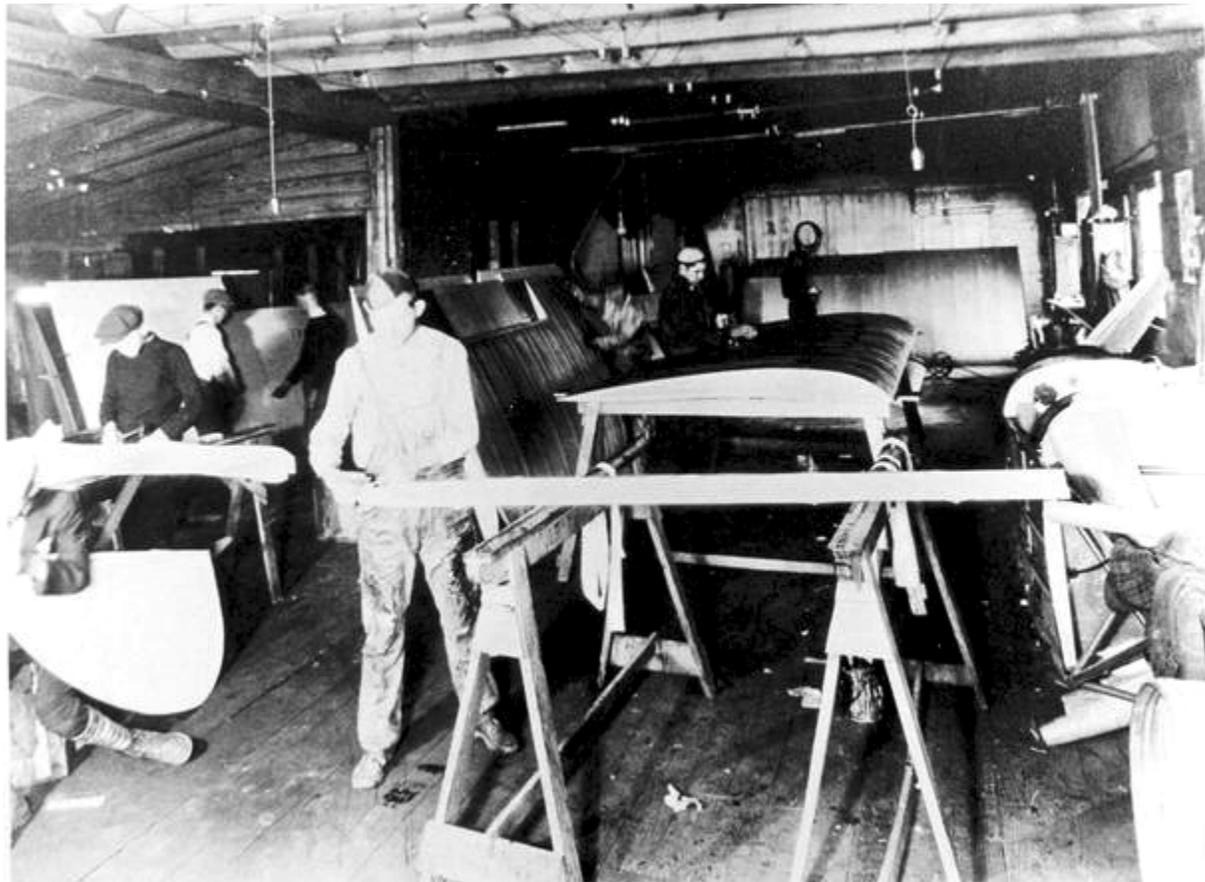


Figure 12. Interior view of Kreider-Reisner Shed, showing crowded working conditions, ca. 1927 (*Courtesy Hagerstown Aviation Museum*).



Figure 13. Assembling wing and fuselage framework on the KR-34 Challenger outside of the Hagerstown Retinning and Plating Co. building, ca. 1929 (Courtesy Hagerstown Aviation Museum).



Figure 14. Finished KR-31 Challenger outside of the Kreider-Reisner hangar at the Hagerstown Airport, ca. 1929 (Courtesy Hagerstown Aviation Museum).



Figures 15-17. The three principals of Kreider-Reisner and Fairchild companies. Ammon S. Kreider in his flight suit, months before he died, and Lewis E. Reisner, both seen in front of their Challenger aircraft, ca. 1929. A studio portrait of Sherman M. Fairchild is below left, ca. 1930 (*All courtesy Hagerstown Aviation Museum*).



Figures 17 & 18. Rear clamshell doors of the Hagerstown Aviation Museum's newly acquired C-82 Packet, 2007. Below is the template for main assembly fuselage of the Fairchild XC-82, which would fit below the floor of the aircraft. The template, complete with fabrication drill holes, was removed from south wall of Kreider-Reisner Shed, where it had sheathed the wall from 1943-2006 (*Christopher H. Marston photos*).



Figures 19 & 20. Artifacts from the shed's attic include an 1887 calendar from the *Baltimore Sun*, and a late 19th c. rotary calendar from the Chicago & Alton Railroad (Fig. 19 courtesy Kurtis Meyers, Fig. 20 by Christopher Marston).





Figures 21 & 22. Deconstructing the Little Green Shed. Removal of rear siding reveals 8" rake and attic window on what was actually the front elevation of the original Middlekauf shoe shop. Below, Doug Reed leads a team of volunteers in lowering a section of the roof during the disassembly process in February 2006 (*Christopher H. Marston photos*).



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