

## English captions for **Volume I** of the book

"Hans Jacobs – Pionierleben im Flugzeugbau"

by Peter Ocker

Dear Reader,

this is a free pdf-download-document.

It describes the captions of my German-language book "Hans Jacobs – Pionierleben im Flugzeugbau" in English language. They are sometimes a little longer than the German original version, as they now contain more information that German readers can find in the text.

A similar pdf-document is available for Volume II.

Both documents can be downloaded from my homepage www.peterocker.de

## Part 1: Hans Jacobs - Life & Work

Page	Caption
8	Diemut Schultz, a young German pilot and VGC member. This book is dedicated to her, having had a passion for old gliders.
	In August 2007, she took off for her last flight in a "Kranich III".
	e 1907-1927: Hans Jacobs – the early years
10	Parents of Hans Jacobs: Father Johann Adolf, born 1873 and Mother Martha Friedericke Emilie, born 1884
11	Young schoolboy Hans Jacobs in 1913 in Hamburg
12 left	Spare time sailors Herbert Lück and Hans Jacobs, friends since their time of apprenticeship at Blohm&Voss shipbuilding
12 middle	Playing in the mud: Hans Jacobs in the center, Herbert Lück to the right
12 right	Hans Jacobs as a ship's cook
13	Lück and Jacobs on their sailboat in the North Sea, which they had during their time at university
	asserkuppe till 1927: The time before Hans Jacobs
17	An early postcard of the Wasserkuppe from 1910 shows the ideal conditions for gliding of this forest-free hill to all sides.
	(Wasserkuppe = "water summit" is the highest mountain of the Rhön = mountain range in German state Hesse)
18	First Rhön-Gliding Competiton 1920: the glider from a Berlin group
19	"Falke", first glider designed by Lippisch in 1921, showing its structure. It was built by a furniture company near Fulda.
20	"Falke" in front of the house, built on behalf of a German company called "Schweizer", therefore called "Schweizer-Haus"
	("house of Schweizer"). This undertaking was not successful and no further gliders were built and the house broke up in the
	next winter
21 top	"Weltensegler" glider with pilot Willy Leusch. Background left sees one of the tents that were pitched for housing the gliders
04.1	during the early competitions
21 bottom	The famous "Blaue Maus" (=blue mouse), flown by Klemperer from the Aachen group in 1921 after a successful bungee
00.1-6	launch. This start method was introduced by the Aachen group
22 left	Lippisch (in front, design) and Espenlaub (behind, building) on their glider "Espenlaub E2"
22 right	Lippisch with a foot-launched biplane design
24	Simple design in it's name: the "Simplex" glider of Pelzner from 1923
25	Postcard showing the logo of the "Rhön-Gliding Competition1924"
26	Early simulator training 1924/1925 on the "Wackeltopf" (= bouncing pan) with instructor Karl Student. He later became
	General of paratroopers
27	The gliding school of Arthur Martens: left building hangar, right building school, accommodation and workshop

Page	Caption
28	Drawing of all buildings of the Wasserkuppe in 1925: front "Berggasthof" (=hill restaurant), middle Martens gliding school, rear
	the houses including the famous "Ursinus-House" (with the antenna on the roof)
29	"Prüfling" glider over Wasserkuppe, Ursinus-House with Antenna below
30	Pitching of massive tents for the competition 1926 or 1927
32	Bungee launch of a early "Zögling"
33	Alexander Lippisch starting an experimental model airplane
Wasserkupp	be time 1927-1933: Working at the Rhön-Rossitten-Gesellschaft
35	Reunion in front of Ursinus-House, see the RRG-flag on the flagpole (RRG = Rhön-Rossitten-Gesellschaft, a club behind all
	gliding acitivites on the Wasserkuppe and at Rossitten/East Prussia)
36	Bungee is not released on this "Prüfling"-launch. Far left: long Hans Jacobs (1.95m) scared.
37	Typical winter on the Wasserkuppe, the Ursinus-House half-right, the Martens gliding school on top
38	An early example of the "Professor" showing its 3-part wing and early version of the ailerons
39	Robert Kronfeld with "Professor" D-Rhöngeist (registration Germany – "Rhön ghost") in meteorological flight suit at Darmstadt-Griesheim, march 1932
40	Prototype of "Professor" in the shrubbery – Wasserkuppe 1928
41	Schleicher's two-seater "Luftkurort Poppenhausen" (=fresh air sanatorium-town + name of his hometown on the foot of
	Wasserkuppe) in uphill-transportation
42	Günther Groenhoff getting bungee launched in a "Zögling"
43	Hans Jacobs, enjoying a cigar
44 top	Transport of a "Leichtwindsegler Hangwind" (= light wind glider + slope wind) with Herbert Lück (4 <sup>th</sup> from left), improved primary with fuselage
44 bottom	First tug aircraft of RRG: a Udet U12 "Flamingo" showing its tug installation designed by Jacobs
46	Flight instructor Groenhoff speaking to his pupils on a "Falke" – not the medical guy on the floor
47	Launch of the "Wien", left the eagle memorial and right a distance measuring device
48	Preparing the start of Kronfeld in his "Wien" in front of the hill restaurant
49	Hans Jacobs (seated, white shirt with tie) with colleagues of RRG
50	Groenhoff getting an unpowered bungee launch with the "Storch IV"
51	Jacobs on his motorbike to move house – Hamburg flag and his rapiers still indicating his origin
52	While Lippisch (middle) helds a reunion, Hans Jacobs is designing on his drawboard next door
53	Coffee break for Jacobs (left) and Lück
54 top	Hans Jacobs observes the bungee launch of a "Falke" and probably takes a picture

Page	Caption
54 bottom	Groenhoff in the "Fafnir", showing an early stage of fuselage-wing-design – this changeover was modified several times as
	turbulence hit the tailplane
55	No comment on Groenhoffs flying talent, right the Ursinus-House
56	Having a rest on the window and enjoy reading: Hans Jacobs
57	Reunion of Lippisch-team – names from left to right
58	Advertisements from "Flugsport" magazine indicating that RRG sold material and plans for several gliders to interested groups. Note: Customers from other countries had to pay twice the amount – because foreign currency was needed urgently.
59	Klemm as tugplane
60	"Prüfling", far right is Herbert Lück
61	Difficult transportation of the "Fafnir" on the Swiss Jungfraujoch-mountain (Glacier-launches)
62	Lippisch inspecting the quality of glue works on a glider and educating future inspectors at the same time
63 top	Hans Jacobs on his motorbike talks to Wolf Hirth (leather cap and goggles)
63 middle	Hans Jacobs in the sidecar of his bike with friends
63 bottom	His first car – a BMW 3/15, this specific example was a former racecar that served for a 10000km drive through Europe. The car also was famous as "Dixi"
64	The gliding licence of Herbert Lück, issued by RRG and signed by Fritz Stamer and Walter Georgii
65	First test assembly of the "Obs" (flying observatorium) at the workshop of Schleicher – wings came from the Wasserkuppe RRG workshop, fuselage from Schleicher.
66	Famous pilot Peter Riedel (see his 3-volume books on the Wasserkuppe and the book of Martin Simons "German Air Attaché  – Life of Peter Riedel) in a "Professor"
67	First test flights of the huge "Obs" on a bungee rope.
68 top	The giant: Kronfeld's "Austria" on the Wasserkuppe on its first appearance
68 bottom	Obituary notice of Groenhoff, printed in "Flugsport" magazine, one day after his fatal accident in the "Fafnir"
69	Italian Ponti flying the second prototype of the "Rhönadler" during the 1932 Rhön competition
70	Advertisement of Schleicher, offering not only the complete "Rhönadler"; but also the plans for it!
71+72	Official press note of the dissolution of the private RRG(based at the Wasserkuppe) due to political pressure after Hitler became chancellor and changed everything – leading towards the state-owned DFS (based at Darmstadt airfield)
Darmstadt er	nployee-time 1933-1941: Working at DFS
75	Entry to DFS (Deutsches Forschungs <u>-Institut</u> für Segelflug, from may 1937 on Deutsche Forschungs <u>anstalt</u> für Segelflug = German Research Institution for Gliding) at Darmstadt-Griesheim airfield. Note the small glider and flying wing in the gate.

Page	Caption
76	Post-war picture of the modified buildings (modified roof construction), then used by US Forces. Note the entry gate picture
	from page 75
77	The prototype-"Rhönbussard" on a gliding competition at Hirzenhain airfield in 1933, flown by Erich Wiegmeyer
78/79	Simple as that: a postcard indicating that Herbert Lück became a flight instructor
79 below	Postcard from DFS South America-expedition members to Oscar Ursinus
81 top	"Präsident" glider attached to Zeppelin LZ127, when launches were carried out by glider pilot Wiegmeyer (inside the glider)
	under the watchful eyes of famous Zeppelin captain Hugo Eckener (in uniform left of the glider's front)
81 bottom	Same glider in front of the "Berggasthof" on the Wasserkuppe
82	The "Fafnir II" came as a surprise on the 1934 Rhön competition. It arrived on the 5 <sup>th</sup> day of the competition, as it was not
	finished earlier. Note the watchtower was built near the hill restaurant.
83 top	Structure of the DFS: departments in the first column (director/administration/flight/instruments/technical/check/flight check)
	and sub-groups below (aerology+meteorology/flight measurement/flight
	operation+workshop/research/gliding/development/stiffness- and material check)
83 bottom	Chancellor Hitler (3 <sup>rd</sup> left, unusually wearing civil cloths) talking to Prof. Georgii (left) discussing the possibility of military use of
	gliders at Munich airfield 1934. The glider is the "Obs".
84	Hans Jacobs was "convinced" while visiting the Hornberg airfield in South Germany to do some flights in a Grunau 8. After 4
	flights he went solo – he only had one "Zögling" launch before that day, which ended in a crash!
	But he had experience in motor aircraft already.
85	Painting of Ernst Udet flying a "Rhönbussard" over Germany's highest mountain, the "Zugspitze". Udet wrote a dedication in
	February 1935: "To Hans Jacobs, with German flight salute and marvelous appreciation"
86	Hanna Reitsch sitting on a "Rhönsperber" – don't copy this kind of relaxing position on any glider!
87	Last common picture: all 4 pilots succeeding the first 500 km-flight in gliding history from Wasserkuppe to Brünn (Brno, Czech
	Republic). Names mentioned from left to right.
	Oeltzschner was killed on the aerotow back to the Wasserkuppe, as his "Condor" broke up! Therefore, the record flight was
00 4	dedicated to his name. The "Rhönsperber" on the picture was flown by Heinemann.
88 top	Launch point Wasserkuppe in 1935 with a colorful "Rhönadler" in front
88 bottom	4 "Rhönadler" in the foreground, wearing Olympic rings to promote the following year's Games in Berlin. Note the different rudder markings, left side swastika and right side "still" the old German colors.
89	ISTUS diploma for Herbert Lück, who received the glider performance medal No. 77 following his 8h33min permanent and
00	50km distance flight.
90	"Rhönsperber" built by Schweyer company at Ludwigshafen, old registration "D-Rhönsperber 2" still visible, received already
	Swiss markings and future registration HB-160 markings for the flights on the Jungfraujoch mountain in September 1935.  Note this specific glider re-appears again on page 101!
	Note this specific glider re-appears again on page 101:

Page	Caption
91 top	Early "Kranich" called "D-Silberkranich" (=silver Kranich) in aerotow at Darmstadt-Griesheim airfield
91 bottom	Ernst Udet on the frozen lake "Eibsee" near Garmisch-Partenkirchen in February 1936. With this open-cockpit "Rhönsperber" he showed aerobatics during the Olympic Winter Games of 1936.
92	Hermann Göring visiting his aerobatic-enthusiastic WW I-companion Ernst Udet at Berlin
93	Mockup of the "Rhönsperber" for aviation exhibitions by Schweyer Company
94	Hanna Reitsch on the "Sperber Junior" including DFS-crew. Note the badges on their overall suits – a carry-over from old RRG-times! (see flag on page 35)
95 top	Hanna Reitsch (right) with early "Habicht" marked D-Turul in 1936. Turul is the name of a mythic Hungarian bird, brought back from the DFS crew taking part on an ISTUS meeting in Budapest in May
95 bottom	Advertisement poster of Schweyer company, showing the three gliders in its production program.
97	Military visiting the DFS for the first mock-up of the DFS 230 assault glider: left Hans Jacobs, Ernst Udet (4 <sup>th</sup> left, in uniform) and Walter Georgii (5 <sup>th</sup> left) at Darmstadt
98 top	Jacob's vision of future pilots position: Fafnir, Reiher and ??? (future)
98 bottom	Hanna Reitsch carried out the maiden flight of DFS 230, Hans Jacobs interviewing her. Note the one-piece canopy of early DFS 230, later changed to a fixed windscreen and separate canopy.
100 top	Hans Jacobs and Hanna Reitsch at Salzburg ISTUS meeting 1937
100 bottom	Hans Jacobs on a drawboard
101 top	The former Swiss "Rhönsperber" in Austrian markings at the ISTUS meeting 1937 at Salzburg (Austria), just some miles way from Ainring airfield (Germany) which later became home of DFS in wartime.
101 bottom	Stress research on the "Fafnir II", who had received a full color painting
102	"Fafnir II" on the first International Rhön-Gliding Competition on the Wasserkuppe, later became the first recognized World Gliding Championship
103	Early "Kranich" with competition number and markings, note the early elevator design
104	DFS-booth at the Milano Aviation exhibition, Italy, October 1937
106	First appearance of the "Reiher II" on a national target-flying competition from NS-flying corps on Sylt island
107	Prototype of "Weihe", flown by Otto Braeutigam on the Rhön gliding competition 1938, ending up on 4 <sup>th</sup> position overall
108	US Policeman asking questions to well-dressed German ambassador staff Peter Riedel in the USA. Note markings on the vertical stabilizer: "Manufacturer: Schweyer aircraft, Ludwigshafen / Rhine" and "Operator: German Embassy, Washington"
109	Still without final registration, these pictures show the "DFS-Olympia" first flights. "D-11" is only part of the marking, later the two prototypes became "D-11-239" and "D-11-240"
111 top	Nervous German DFS members at the comparison flights of 5 different gliders applying for the "Olympia Glider", names from left to right. Hans Jacobs had his camera with him. All pictures taken at Sezze airfield in February 1939.

Page	Caption
111 bottom	Congratulation letter from Ernst Udet: "My dear Hans Jacobs, the technical verification of Olympic Gliders from February 19 to 25 at Sezze-Romano airfield clearly showed the impeccable superiority of your design "DFS-Meise". Following the matchless row of your last designs in gliders, you have now found international compliment. My deepest congratulations for this well-deserved distinction and I am happy that DFS has such an experienced and foresping designer in their stoff.
	experienced and farseeing designer in their staff. Wishing you further successes, I am with you"
112	A handwritten congratulation letter of Alexander Lippisch of March 1939: "My dear Hans Jacobs,  I must tell you – although in few words – how happy I was with the victory of your machine at Rome. This you really did fabulous. I want to thank you as a German and as an old, unforgettable gliding idealist for your success, that you achieved for all of us. And if somebody deserves this success, it is purely you with the brave Hanna Reitsch together, to have rescued the fame of the German prestige in Gliding. Maybe there is somebody who may not understand and recognize your great achievement. Ignore those small ghosts. They may not leave their yesterday's eat-in kitchen.  Be proud that you did it, and be assured that there is only one thing in life that thanks faithfulness: the own work and the own creation.  My best wishes are with you in the future for all your work.  Your old friend, Alexander Lippisch"
113	The two unique gliders "Reiher II" and "Windspiel" on a Libya expedition, trying to find out about thermal possibilities there – which were found to be negligible.
114	"Weihe"-launch, the swastika was painted over on this specific picture once after the war, as the swastika is a forbidden symbol in Germany nowadays. Therefore, no "new" swastika is allowed to be created in Germany (like on models, 3-view-drawings etc.) and no "old" swastika is allowed to be shown in public (exception: inside historical books or exhibitions relating to a special paragraph of German law).
115	Hans Jacobs, Herbert Lück (middle) on a drawboard
118	Hanna Reitsch flew tests on a balloon-cutter-equipped Dornier Do 17, here she is in front of a Heinkel He 111 with a similar device.
120	Prototype of DFS 331 assault glider during tests regarding his center of gravity at Erfurt
Darmstadt en	trepreneur time 1941-1950: Jacobs –Schweyer Flugzeugbau and Holzbau Weiterstadt
122	Logo of new Jacobs-Schweyer Flugzeugbau company
123	Notice in Darmstadt regional newspaper, following the approved foundation, showing that Hans Jacobs and Schweyer company formed a new company, Jacobs-Schweyer Flugzeugbau (JSF)

Page	Caption
124	Postcard promoting the "Weihe": while "JS" served as short form of "Jacobs-Schweyer", the number 68 was the official
	authorities number of the "Weihe" glider's type
125	JSF took over empty buildings on Darmstadt airport and had to transfer hangar space into manufacturing facility and old
	classrooms into offices.
126	Department Development and Strength, lead by Herbert Lück (sitting in front of mock-up of a twin-seater)
127	Late postcard promoting the "Weihe"
128	Mass production of the "Weihe", 234 examples were ordered by German Air Ministry. This device assists the glueing of
	ailerons.
129 top	Although well calculated on the paper, the "Weihe" had to undergo numberless tests ordered by the Ministry – no other glider ever was tested more in detail.
129 bottom	Series production of "Weihe" wings.
130	Covering the D-box of the "Weihe"
130 / 131	Volunteer field work was necessary to feed all employees in the company. Although not according to NS-rules, JSF always
	treated German or Foreign workers identically.
132	Plan of JSF, taken from a Messerschmitt paper regarding the planned production of Messerschmitt Me 328 universal aircraft.
133	Young apprentices had a special workshop, here they made Christmas gifts for their families
134	Also the professional employees were allowed to make Christmas gifts during their spare time
136	Original JSF "Weihe" typeplate, indicating non-powered aircraft (category 108), type number 68 and serial number 289 from 1943
137	In 1944, Hans Jacobs married the second time. His first wife died with a heart-attack, leaving one son. His second wife was with him for life, having 3 children.
138	Final control of "Weihe" fuselage for NS Flying Corps (NSFK-symbol on the fuselage)
139	"Weihe" canopy – built by old and young employees. The "middle-age" men had to serve in the armed forces.
141	Employee ID card
143	A late-war "Rhönbussard" on the Wasserkuppe, wearing German Air Force markings
145	"Rhönsperber" of Akaflieg Stuttgart, flown by American fighter pilots at Stuttgart-Echterdingen airfield.  Note the P-47 in the background
146	Jacobs family were at Wolf Hirth's home at the end of the war. This attestation allowed them to return to Darmstadt, signed by
<del>-</del>	the provisional mayor of Kirchheim village: Martin Schempp (Schempp-Hirth Flugzeugbau)
	Martin Schempp was in the US for years working for Haller, so the Americans made him the provisional mayor right after the
	war.
147	War prize: A "Kranich II" in French Military colors

Page	Caption
148	Also a war prize: "Rhönsperber", still wearing some German markings on the fuselage, but the Tricolore on the rudder
149	Starving, but happy: Hans Jacobs after the war
150 top	Jacobs family in the garden
150 bottom	War prize "Weihe" flown by British forces
151	JSF was re-named in "Holzbau Weiterstadt", after moving from Darmstadt to nearby Weiterstadt village. Note the control stamp "German" and "Geschäftlich" (=commercial)
152	Dream of many Germans: re-allowance of gliding by the Allies, waiting for an angel to cut the chain
153 top	Model yachts manufactured by "Jaco"
153 bottom	Nice postcard from Wolf Hirth, who visited the World Gliding Championships 1950 in Sweden: "Dear Köbes (=nickname of Jacobs)! Greeting from famous Weihe-pilots (signatures of Hirth, Per Axel Persson and ???) Nilsson is now 2 <sup>nd</sup> in the competition, Persson 4 <sup>th</sup> . In front of this Swedish couple and the Yugoslav Borisek leads Paul McCready, who usually flies a Polish Orlik, but is not worse on the Weihe. Also on (positions) 5, 7 and 9 are Weihe. 16 <sup>th</sup> is a Hütter 28. Borisek flies a thing with very thin wings, not worked out properly. So, he is superior on the Weihe in fast-flight only slightly. Best regards, Wolf. And your ?????"
	950-1994: Hans Jacobs – the late years
155 top	Re-Allowance of Gliding in Germany: Fritz Stamer doing the maiden flight of a "Zögling" on the Wasserkuppe
155 bottom	Important attestation of Hans Jacobs, indicating that the "Weihe 50" drawings are based on the JSF "Weihe" drawings and only contain minor changes.
156	First flight of the "Kranich III" at Bremen airfield in May 1952. Note, the prototype had a 3-piece-canopy! Sitting on the floor is Ernst-Günter Haase, Hans Jacobs and Hanna Reitsch
159	Since 1950 Hans Jacobs was employed by a steel company, also manufacturing garage doors
160	Industrial storage rack, including handling system, designed by Jacobs. Seen here on the Hannover fair
162	First caravan trip to Denmark
163 top	Presentation of Akaflieg Darmstadt D37 at Griesheim airfield, Hans Jacobs next to the cockpit
163 bottom	Vintage Glider Club Rally 1977 at Münster/Germany: Hans Jacobs is too tall to fit into a "Weihe"
164	Lilienthal memorial ceremony on a foggy Wasserkuppe in 1980
165 left	Inspecting a DFS 230 fuselage in Le Bourget, 1988
165 right	Well-known inspection work since 64 years: Jacobs checking the glue on a replica DFS 230 wing in October 1991
166 top	First public presentation of DFS 230 replica in 1992, built by a club lead by Hans Jacobs at Deutsches Museum Oberschleissheim. Hans Jacobs in the middle wearing a hat. This replica is now in German Airforce Museum at Berlin-Gatow.
166 bottom	Gravestone of Hans & Regina Jacobs at Siegen cemetery – a gull-winged glider watchfully turning its circles over their names

## Part 2: Hans Jacobs – Aircraft under Alexander Lippisch

Page	Caption
169	Early version of "Zögling" showing its interior. Glider also carried the name "R I" as first RRG-glider.
170	"Zögling" still without suspended skid
172	"Zögling" with logo of "Kegel-Flugzeugbau", also known as "Ackermann-Kassel" (therefrom the "AK" initials)
173	"Zingo" was an evolution from the "Zögling", having a larger wingspan and aerodynamic fuselage (compare advertisement for
	plans on page 58) Here, flying at Rossitten area / East Prussia
174	"Zingo" at the Hesselberg mountain in Bavaria
175 top	RRG advertisement of "Zögling", now also available with steel tube (as on the "Hi 1")
175 bottom	"Hi 1" was an evolution of the "Zögling" by Wolf Hirth, here as amateur built example in a gym at Heubach, March 1933
176 top	Sharp-nosed fuselage of this "Steel-tube-Zögling"
176 bottom	Number 3 of 4 "Zögling" built in Yugoslavia by worker's sportclub at Zemun, see registration Z-3 ("Zögling 3") on the rudder.
177 top	Swiss "Steel-tube-Zögling", sold to Germany in the early 1950ies. Some "old" Swiss gliders formed the base of re-allowed gliding in Germany
177 bottom	Based on a "Zögling"-layout, Italian Teichfuss created this double-seater
178	Slingsby built the first examples of "Zögling"-based "Type 3 Primary" in the workshop of Scarborough tram – avoid falling
	down in the inspection pit.
179	Designers notes on "Zögling 33"-plan for suspended wing-attachment and seat: Hans Jacobs did the control
180	"Brett-Zögling" (=plank-Zögling) on Lippisch basic form II (see page 190) was only built in this unique example
181	A metal version of "Zögling 33"
182 top	A "12m-Zögling" looked much different
182 bottom	Signs of a new time: youngsters in flight training
185	Unique: either double-seater glider or single-seater motorglider with push-propeller – the "Zögling" of Luis Obermeier is said to
	never ever had official registration, but flew for 30 years glider still existing in the hands of his family. Obermeier also
	equipped the SF 27 with an engine and was pioneer of "turbos" in gliders
188	"Prüfling" on the Wasserkuppe, on the picture below it is Stamer on the wing. Glider also was called "R II" as second RRG-
	type.
189	Amateur-built "Prüfling" at Bingen, Rhine river
190 top	Comparing "conventional" layout on the left and Lippisch layout on the right. Basic layout II was only tested in the "Brett-
400 1 11	Zögling" and Basic layout III lead to the "Storch" family
190 bottom	First model of a "Storch"
191 top	Huge model leading to the "Storch"-family

Page	Caption
191 bottom	Plank-type glider model, only lead to the plank-Zögling on page 180
192	Early version of "Storch" had a round fuselage
193	"Storch IV" had a different rudder layout on the tips and a square fuselage
194/195	"Storch V" was equipped with a DKW-engine of EIGHT horsepower
196	"Storch VII" was built for Groenhoff to get a price from a Berlin newspaper. Right picture shows Groenhoff (with hands in
	pocket) on the engine
197	"Storch IXb" at Darmstadt was powered a 30hp Bristol Cherub engine
199	"Ente" in its first gliding flights, note the evolution on the rudder on the wingtip. This configuration was ideal to fit rockets to
202	power it. Stamer undertook the first manned rocket flights in aviation history with this aircraft on June 11, 1928.
202	"Professor"-prototype, both pictures with Kronfeld.  Note the modified headrest area in the lower picture. The glider was noted to be "R III", so the third RRG-model.
203	Later version of "Professor", note the larger ailerons
204	"Professors" on the Wasserkuppe, on the hill restaurant and on the transport.
204	This example was owned by a group from Würzburg, having a local newspaper as sponsor ("Würzburger Generalanzeiger")
206	Schleicher's first high-performance glider, the "Frankfurt" – flown and immediately crashed by pilot Groenhoff
207	This view shows the close relation to the "Professor"-layout – just the fuselage was completely different
208	Amateur-built example of the "Poppenhausen" double-seater
210 top	Named "Jupp-Pitter", this Schleicher-built example of a "Poppenhausen" owned by Akaflieg Göttingen flew in the 1930 Rhön
	gliding competition
210 bottom	As already on page 176 bottom, the Yugoslavian enthusiast also built 2 or 3 "Poppenhausen", this first example receiving the
	registration "LP-1" (LP= Luftkurort Poppenhausen, see caption page 41)
211	The "Mannheim" double-seater was later sold to Kronfeld, who gave it the name "Fasold"
212/213	A first try of RRG to built a double-seater for their school, here flown by Fritz Stamer. Due to the usual bungee-launch method,
045	the heavy double-seater proved to be not suitable for training and Stamer sticked on his single-seat training method.
215	The "Hangwind" had an unusual tailplane structure, and not many were built.
216	First trial with the "Wien"
217	"Wien" on the Wasserkuppe, with Wolf Hirth on the left
218	First cross-country flights on the Wasserkuppe were carried out by Kronfeld using the "Wien"
219/220	The R IV "Rhönadler" as a high-performance double-seater and the 4 <sup>th</sup> RRG-model
221	The initial "Djävlar anamma!" (=swedish: "The devil may take it") design on a promotional postcard of the Weltensegler glider company
222	Swedish pilot Sandvik, who helped building this very first "Djävlar anamma!", flew his first "C" (flight longer than 5 minutes)

Page	Caption
223	Nice shot of a "Djävlar anamma!" on the Wasserkuppe
224	For Schleicher, the "Djävlar anamma!" was redesigned and the German translation "Hols der Teufel" appeared. In the cockpit: Alexander Schleicher
225	Bungee launch of a "Hols der Teufel" on the Wasserkuppe
226/227	Attention, plastic: wings of a plastic "Hols der Teufel" and the first plastic aircraft in aviation history.
229 top	"Anfänger" (=beginner), a simple version of the "Hols der Teufel" with Alexander Schleicher in front of the trolley
229 bottom	"Anfänger", looks like in Sweden, where a lot of "Anfängers" were flown.
231 top	"Fafnir" on the Wasserkuppe, re-designed transition of fuselage-wing, with Groenhoff on the wing
231 bottom	"Fafnir" in front of the Wasserkuppe hill restaurant, again with another version of the fuselage-wing transition
232	"Fafnir" showing its structure on a bungee-launch on the Wasserkuppe
233	"Fafnir" wearing competition no. 12 on the 1932 Rhön gliding competition
234 top	Wreck after the fatal accident of Groenhoff
234 bottom	The rebuilt "Fafnir" (NOT "Fafnir II") in 1933 received a real canopy
235	Peter Riedel won the 1935 Rhön gliding competition in the rebuilt "Fafnir"
236	Final station museum: with the markings of the 1935 competition, the "Fafnir" found its final place at the Berlin aviation
	museum, where it was destroyed during the Allied air-raids
237 top	Amateur-built early "Falke" in Austria – early example of "R V" (RRG model five)
237 bottom	Lithuanian "Falke", one of two examples built there
238 top	Evolution model "R Va" showing modified wing attachment to the fuselage
238 bottom	Further evolution shows a built-in wheel and larger rudder
239/	"Superfalke" had a larger wingspan (16,89m instead of 13,2m, which caused some trouble)
240	Peter Riedel in front of a "Superfalke" at Darmstadt
243/244	First models of the "Delta"-family – initially called "Köhl-Maschine" as Mr. Köhl (who flew with 2 companions in a Junkers W33
	from England to USA) was the sponsor of the project.
	Later, the sponsorship ended due to differing opinions of Köhl and the RRG.
244 bottom	First "Delta" was built as a double-seat glider.
245	"Delta" glider on the Wasserkuppe, not much to see for the passenger
246	The "Delta I" received a Bristol Cherup 36hp engine and flew successfully with its pilot Groenhoff
247	Although reported to never had been finished, the "Delta II" flew on the bungee. Hans Jacobs tries to help his two companions
0.40	in holding the glider back. Problems with the engine were reported and no powered flight is known.
248	"Delta III" was built with a push- and converted to a pull-prop configuration after a crash.
	Picture shows the pull-prop configuration.

Page	Caption
249 top	Push-Pull-Configuration on this "Delta IV", or also called Fieseler Fi-3 "Wespe" (= wasp) with sponsor markings of cigarette
	company Haus Bergmann.
249 bottom	"Delta IVc" with pull-configuration, Heini Dittmar on the fuselage
250	Still unmarked – first flights of the flying observatory "Obs" on the Wasserkuppe
251	Although a competition number attached, the "Obs" was not noted as real participant in the 1934 Rhön gliding competition
254	"Präsident" built by RRG and attached to a Zeppelin. Show-starts were made at Friedrichshafen and Berlin, but no scientific flights were undertaken any time. Glider later received registration D-11-35 and was flown until February 1944 by the Luftwaffe.
255	A second "Präsident" was built in his spare time by young pilot Rudi Opitz. He flew his glider on the Rhön gliding competition 1935 only in one day, but the following year he achieved a 35 <sup>th</sup> position overall – he had to repair his glider for 4 days after a misshaped landing and lost those 4 competition days
256	The "Präsident" had a 3-piece-wing. This second example was re-named D-11-34 and got broken at a Luftwaffe training unit at Halberstadt. A thunderstorm blew it over, so it was damaged beyond repair on April 15, 1942.
257/258 top	Pround Heini Dittmar posing in front of the "Fafnir II" at the Wasserkuppe
258 bottom	Later, the glider was painted, seen here at Griesheim airfield.
259	Modified canopy on the "Fafnir II" and later, the glider received the registration D-11-78
260 top	During the first International Gliding Competition, winning pilot Dittmar had the competition number 23. Later, this was declared to be the first World Championship.
260	It is not known who crashed the "Fafnir II" so badly on the Wasserkuppe
261	One of the few existing pictures of the "Maikäfer" motor-touring glider.