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March 2016

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**ON APPROACH**
April 2016
Leonardo di Caprio finally got his Oscar win. He deserves it and it's a good thing, but even if he didn't win, it wouldn't matter, since we all know that he is very talented, and who is talented is talented, irrespective of awards and certificates.

Artistic fields are very competitive, but often it's a different kettle of fish here, where the Model of the Year is won by pretty much anyone who shows up at a contest, and even the odd time, someone who doesn't. This year, it looked as though we would end up sans medal and I was actually feeling better for it. I was thinking about Leo and his dry streak, but then a delegation with an award, not a medal but a plaque, appeared. So much like Martin Luther King, I too have a dream. My dream is about a time when our business will have a counterpart to the Oscar, an award that will carry weight, one that all firms will strive to achieve, and it will be an honour to have, will be handed out at a red carpet gala affair, or at least, until it becomes a big affair, would be held in a smaller salon somewhere on a Saturday afternoon. It would reward truly the best of the best, with only one award per category, and there would be just enough categories, probably one per scale, with no inflation. And I would gladly and patiently wait until winning the award, as long as it was deserved. What's that, you say? No? It's not possible to put together an Academy of Plastic Model Manufacturing? Our field could gain some needed spice and tempo. I have resisted the feeling for a long time now, but this year I find it a little more persistent that our industry is losing a bit of its drive, is lacking idea and vision. Over the last few months, there has been a bit of a problem of which kits to design photoetched accessories for, and there doesn't seem to be that much to choose from. Not that there are no models coming out, but I get the feeling of uncertainty as to weather or not they are the types of kits we really want to put the time and effort into designing accessories for. As a sidenote, have you had a chance to check out the HBO series 'Vinyl'? If you haven't, you should. It has spice and tempo. It gave me a new zest for life, as I nursed myself back to health after bringing back with me my annual Nuremberg flu. How about 'Bridge of Spies'? Also good. Some good things to know, for the current modeller.

And as I entered my second week of trying to shake off the bug that had grabbed a hold of me, another interesting discussion came to light on a modelling forum, so I certainly wasn't bored. There were three circles of discussion. There is still a group of people that are bothered be nickel plated photoetched brass, even though we abandoned the practice a while back already, save for coloured photoetched. Our regular photoetched has the natural finish of the brass, except for those that are etched out of stainless. And speaking of stainless, it appears that we will be expanding the use of this material. For May, we are planning the release of the first a collection of colour stainless colour belts that, as our testing is showing, have some very pleasant qualities, and it is anticipated that these will become very popular. They will also be very thin, some 0.05mm, almost paper thin. For the near future, we are thinking of ship accessories, but let's hope they will not be confused with galvanized steel. Another issue is the roster on the photoetching. It's still a bother, although I think that we really did a lot for the reduction of the problem, and that being aware of the problem might be as much an issue as the actual phenomenon itself. We are aware that this problem can be visually eliminated by a coat of lacquer over the coloured etch, and we are devising a plan to incorporate the coating process into the production of the brass. I am hoping that this will all be solved in the near future, and that we will be introducing a new, innovative line of coloured photoetched that will stand up to the highest scrutiny. The third issue comes a little under the heading of folklore: the usefulness of etched brass. More specifically, how many of the etched parts on the fret are actually relevant, and how many amount to not much more than ballast designed to jack up the profit margin of the product. I am convinced that with respect to this notion, we have addressed that point a long time ago. Before the fall of 2014, we began to be mindful of the number of parts placed on a photoetched fret and have carefully focused on designing parts that benefit the end user with no redundancy. But, this is easier said than done. Weather or not a given part is useful or redundant is a matter of personal opinion, and sometimes I think that there are as many opinions as there are modellers. I fear that we may even swing the pendulum too far in the other direction, and there will be criticism of missing parts that we deemed to be redundant, and so did not include them. I hope that everyone in this debate will keep an open mind, and take into account that what one may see as a money grab and a waste of photoetched fret real estate, another might see as the height of chemically milled creativity.

Let's have a look at new releases for March, 2016. In the photoetched and mask lines, there is the usual coverage on new items designed for other companies' products as well as for our own. Covering one of our own products is the Zoom set SS549 for the Fw 190A-B that was released as a Weekend Edition kit, and set No.48878 ‘Rockin’ Rhino’ upgrade set, which is designed for February’s Limited Edition 1143 ROCKIN’ RHINO, the 1/48th scale Phantom II. This is a very popular item and is a star within our catalogue. It is going fast, and will not last much longer in stock. This set complements the one that is in the kit, and expands on it. Other sets yield one more potential best seller, that for the 1/35 scale M4A3E8 Easy Eight from Tamiya. Then, there is the set for the Su-25K from Smer, in 1/48th. This set is interesting in the way it conceptually follows the set for the Su-22M4 from the same manufacturer. Both kits, as is generally well known, hail from OEZ Letohrad. The aforementioned set for the Su-22 drew unusual attention. It first received the lowest amount of interest in terms of pre-orders for the month, but in the two following months, we had trouble keeping up with demand for it. It also is an interesting set from a historical point of view. As you may know, a set for this kit was the very first product that we broke onto the market with back in 1990. Not too long ago, we released a new set for it, and this is our third for this model. I cannot recall another set that made it to a second remake and a third production version. Also new for the month are the last two sets for
the USS Texas in 1/350. Loosely connected in theme to the Texas is Kittyhawk’s 1/32nd scale Kingfisher for which we are releasing three photoetched and a mask set. The sets for the Mirage IIC from Italeri in the same scale, the 1/48th Tornado GR.4 from Revell and the Skywarrior EKA-3 from Trumpeter will also be noteworthy. My personal favorite is the I-153 from ICM. I read a very critical Russian review of this kit which I do not fully understand, as I see the kit as being a very nice piece of work and the criticisms, to me, seem to be largely nonsense. I think that even our set does it justice, and it may be true that well made kits yield well made accessories. Finally, we have the set for the 1/48th scale Gladiator from Merit, and two sets in 1/72nd scale, the Apache AH-64D Block II from Academy and the Su-33 from Trumpeter. As with every month at this time, I would also point out the quartet of new Big Ed sets. Turning our attention to Brassin sets, there are ten new sets being released, and noteworthy is the cockpit set for the Fw 190A-5 in 1/72, naturally designed to fit our own kit released in February. The same kit receives the WGr.21 rocket tubes, which is also applicable to the Fw 190A-8, which brings us to models. In the current release schedule is the Fw 190A-8 in 1/72nd scale as a Weekend Edition kit, featuring the so-called standard wing. That is the wing without the fairings over the outer cannon positions, leaving the wings to carry four MG131/20 20mm cannon. The markings options covering two aircraft are among the most striking we could find for the Fw 190A-8 of this type. Markings of this calibre are standard fixtures of Weekend Edition kits, as you may have noticed. The second kit released is the Quattro Combo Avia B.534 Late Series (IV.serie/Bk.534) with five markings options for standard combat Avia B.534s of the fourth series, one for one of the unaired race versions from the Zurich races in 1937, and two for the Bk.534. The final item for March is the Limited Edition kit No.1140 Legion Condor dedicated to the Spanish Civil War. It is a Dual Combo kit with two complete sets of plastic, one for the Bf-109E-1 with an alternative wing for the E-3 and with three sets of markings for the E-3 and one for the E-1, and also the He 51 (Roden) with four markings options. The decals are printed by Cartograf, and the kit contains the usual photoetching, resin and masks. The kit can be largely considered a companion piece to the previously released kit dedicated to the Spanish Civil War I-16. It is being released in a quantity of 1500 kits. I hope no one was overly offended by the Facebook ‘Legion Condom’ gag, but it was the most commented item on our Facebook page since it started up. And sticking with Facebook, I have a small warning, especially for those faint of heart. In April, we will be releasing our newly tooled BF 109G-6, and I don’t want to go too deeply into it until next month, but we are launching a corresponding advertising campaign 90% of which will be through Facebook. If you are indeed faint of heart, or simply are all too easily riled, stay clear of our Facebook page. We have been accused of aggressive campaigning from all sides, and really, the viewing of any advertising campaign requires a certain active participation on the part of the viewer, so at least some of the criticism is a fallacy. The solution is simple. Don’t click on our Facebook page, and you’ll be just fine. And if you do click, and find the aggression unbearable, you can click it off, too. I promise! And, to those who get a kick out of our marketing ploys, I think you are in for a treat. So, my friends, hopefully we’ll see at Prosek. We will be there armed with our Gustav!

With all the talk about artistic aspects, I forgot about about our own art. The last ten days of March will see the inauguration of our new line called EDUART. It comes as a result of requests for adversary combos and prints depicting combat scenes. We have generally avoided both in the past, but now we have secured the services of Koike Shigeo and the first three items in the line are the work of this master of aviation art. After March’s release of Rise of the Bubbletops with the Spitfire Mk.VI we are preparing the MiG-21PF against the Skyhawk over Vietnam, and a Fokker D.VII against a SPAD XIII over the Western Front in 1918. The prints will be on A2 format paper, and the actual artwork will have margins making it a tad smaller and will correspond to the original painting size and will be packaged on flat surfaces which will bring with it it’s own mailing issues. Editions will be limited to 1,000 prints and will be sold through www.eduard.cz. In the future, the line will not be restricted to the work of Mr. Shigeo, and we are working with other artists on other projects. And a hint to the admissions model....it has three wheels.

Happy Modelling!

Vladimir Sulc
Fw 190A-8 standard wings

1/72, Cat. No. 7435

- 2 markings
- Eduard decals

RECOMMENDED:

73033 Fw 190A-8 seatbelts SUPERFABRIC (PE-Set)
72611 Fw 190A-8 (PE-Set)
672081 Fw 190A-8 cockpit (Brassin)
672084 Fw 190A-8 MG 131 mount (Brassin)
672082 Fw 190A-8 engine (Brassin)
672086 Fw 190A propeller (Brassin)
672088 Fw 190A-8 engine & fuselage guns (Brassin)
672083 Fw 190A exhaust stacks (Brassin)

W. Nr. 350 189, 12./JG 5, Herdla Airfield, Norway, 1945
2./JG 54, Lt. Hans Dortenmann, Villacoublay, France, June, 1944
Avia B.534 late series Quattro combo

1/144 Cat. No. 4452
- painting mask
- Eduard decals

RECOMMENDED:
144008 Avia B.534 (PE-Set)

Avia B.534, c/n 516, 1./JGr Drantheim, Grove air base, Denmark, 1941

Avia B.534, Air Regiment 4, Prague – Kbely air base Czechoslovakia, March, 1939

Avia B.534 4th serie, Combined Squadron, Tri Duby airfield Slovakia, September - October 1944

Avia B.534 4th serie, Gendarmerie aviation patrol, Hradec Kralove air base, Czechoslovakia, summer, 1937

Avia B.534 4th serie, 7./LLG 1, Eastern front, winter, 1942 / 1943

Avia B.534 4th serie, Air Regiment 4, 34th Squadron, Hradec Kralove air base, Czechoslovakia, summer, 1937

Avia B.534 4th serie, 112th Fighter Squadron, Sofia - Bazhuriste air base Bulgaria, early 1941

Avia B.534 4th serie, IVth international aviation meeting, Zurich, Switzerland, 1937
Legion Condor

1/48 Cat. No. 1140

- Sprues Eduard + Roden (He 51)
- color photo-etched set
- painting mask
- Cartograf decals
- 8 markings

Product Page
Bf 109E-1, Oblt. Siebelt Reents, Staffelkapitän 1. J/88, León, Spain, spring 1939


Bf 109E-3, 2. J/88, Catalunyan Front, Spain, early 1939

He 51B-1, Stabsarzt Dr. Heinrich Neumann,  
Medical Battalion San/88, Spain, 1938

He 51B-1, Oblt. Hannes Trautloft, 2. J/88, Ávila,  
Spain, autumn 1936

He 51C-1, Adolf Galland, 3. J/88, Calamocha,  
Spain, spring 1938

He 51B-1, Harro Harder, 1. J/88, Battle of Brunete,  
Spain, July 1937
The Rise of Bubbletops by Koike Shigeo

1/48 scale Dual Combo
Spitfire Mk.XVI & Fw 190D-9

A2 size fine print
"The Rise of Bubbletops"
by Koike Shigeo

Cartograf printed decals
Eduard photo-etched details and painting mask

Spitfire Mk.XVI, TB886, No. 421 Squadron RCAF, Late April / May, 1945
Fw 190D-9, 7/JG 2, Rommelhausen / Stockheim, Germany, May, 1945

Cat. No. 11100X
Released
in March 2016
@ Eduard webstore,
999 pieces only

WWW.EDUARD.COM
INFO Eduard - March 2016
Recommended for kit The Rise of Bubbletops:

- 48650  Fw 190D landing flaps (PE-Set)
- 48651  Fw 190D-9 (PE-Set)
- 48664  Fw 190D wooden landing flaps (PE-Set)
- 648150  Fw 190 wheels late (Brassin)
- 648152  Fw 190 wheels early (Brassin)
- 648076  MG 131 mount for Fw 190D-9 (Brassin)
- 48849  Spitfire Mk.XVI landing flaps (PE-Set)
- 48830  Spitfire Mk.XVI surface panels (PE-Set)
- 49083  Spitfire Mk.XVI seatbelts FABRIC (PE-Set)
- 49725  Spitfire Mk.XVI (fotolept)
- 648206  Spitfire Mk.XVI cockpit (Brassin)
- 648218  Spitfire Mk.XVI wheels - 3 spoke (Brassin)
- 648216  Spitfire Mk.XVI gun bays (Brassin)
- 648217  Spitfire Mk.XVI engine (Brassin)
FW 190D-9 1/48
OVERTREES

CAT.NO. 8184X
FW 190D-9 PE-SET

1.-31.03.2016 ONLY

SPITFIRE MK.XVI BUBBLETOP W/ EARLY WINGS 1/48
OVERTREES

CAT.NO. 8285X
SPITFIRE MK.XVI BUBBLETOP PE-SET

Product Page

Product Page

Product Page

Product Page
Brassin set of 2 pieces of LAU-10/A ZUNI rocket launchers in 32nd scale.

Set contains:
- resin: 14 parts
- decals: yes
- photo-etched details: yes
- painting mask: no

Mirage IIIc wheels
1/32 Italeri

Brassin set of main and front wheels for Mirage IIIc in 32nd scale by Italeri.

Set contains:
- resin: 7 parts
- decals: no
- photo-etched details: no
- painting mask: yes
648187
AIM-4G
1/48

Brassin of 4 pieces of AIM-4G missiles in 48th scale.

Set contains:
- resin: 4 parts
- painting mask: no
- decals: yes
- photo-etched details: yes

648244
Ju 88A wheels early
1/48 ICM

Brassin set of main wheels for Ju 88A in 48th scale by ICM. Early version.

Set contains:
- resin: 6 parts
- decals: no
- photo-etched details: yes
- painting mask: yes

672092
M-2 Browning guns
1/72

Brassin set of 6 pieces of M-2 Browning guns in 72nd scale.

Set contains:
- resin: 18 parts
- decals: no
- photo-etched details: yes
- painting mask: no
672096
Fw 190A-5 cockpit
1/72 Eduard

Cockpit Brassin set for Fw 190A-5 in 72nd scale by Eduard.

Set contains:
- resin: 9 parts
- decals: no
- photo-etched details: no
- painting mask: yes

672097
Shackleton MR.2 wheels
1/72 Airfix

Brassin set of main and rear wheels for Shackleton MR.2 in 72nd scale by Airfix.

Set contains:
- resin: 4 part
- decals: no
- photo-etched details: no
- painting mask: yes

672098
Shackleton AEW.2 wheels
1/72 Revell

Brassin set of main and rear wheels for Shackleton AEW.2 in 72nd scale by Revell.

Set contains:
- resin: 4 parts
- decals: no
- photo-etched details: no
- painting mask: yes
672099
WGr.21 for Fw 190
1/72 Eduard

Brassin set of 2 pieces of WGr.21 rocket launchers for Fw 190 in 72nd scale by Eduard.

Set contains:
- resin: 8 parts
- decals: no
- photo-etched details: yes
- painting mask: no

672100
MiG-29A weapons set
1/72 Trumpeter

Brassin weapon set for MiG-29A in 72nd scale by Trumpeter. Set includes 2 pieces of R 27R/R1 missiles with launchers, 4 pieces of R 73 missiles with launchers, 4 pieces of R 60 missiles with launchers.

Set contains:
- resin: 36 parts
- decals: yes
- photo-etched details: yes
- painting mask: no

E-BUNNY´S SQUAT
PHOTO-ETCHED SETS AND MASKS
03/2016 SELECTED

M4A3E8 1/35 Tamiya (36334)
Mirage IIIc exterior 1/48 Italeri (32385)
Su-33 1/72 Trumpeter (73548)
USS Texas pt. 3 superstructure 1/350 Trumpeter (53156)
USS Texas pt. 4 deck 1/350 Trumpeter (53157)
OS2U Kingfisher exterior 1/32 KittyHawk (32386)
OS2U Kingfisher interior 1/32 KittyHawk (32861)
Gladiator Mk.I 1/48 Merit (49756)
I-153 Chaika 1/48 ICM (49760)
EKA-3 Skywarrior 1/48 Trumpeter (49761)
AH-64D Block II 1/72 Academy (73546)
All sets included in this BIG ED are available separately, but with every BIG ED set you save up to 30%.

**BIG5334 HMS QUEEN ELIZABETH 1943 - PART II. 1/350 TRUMPETER**
- 53148 HMS QUEEN ELIZABETH 1943 pt - 4 cranes and lifeboats
- 53151 HMS QUEEN ELIZABETH 1943 pt - 5 deck and main batteries
- 49743 Figures Royal Navy Pacific and Far East

**BIG49143 Do 215B-5 Nightfighter 1/48 ICM**
- 48867 Do 215B-5 Nightfighter - landing flaps
- 48868 Do 215B-5 Nightfighter - radar antennas
- EX485 Do 215B-5 Nightfighter

**BIG49144 Mirage III E 1/48 Kinetic**
- 48866 Mirage III E exterior
- 49742 Mirage III E
- EX485 Mirage III E
- 49009 Remove Before Flight

**BIG49145 A-6E TRAM 1/48 HobbyBoss**
- 48864 A-6E TRAM exterior
- 49742 A-6E TRAM equipment
- EX485 A-6E TRAM interior
- 49009 Remove Before Flight

INFO Eduard - March 2016
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<td>MASK9</td>
<td>Su-25K interior</td>
<td>1/32</td>
<td>SMERI</td>
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<td>MASK10</td>
<td>AH-64D Block II</td>
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<td>MASK11</td>
<td>Su-33 interior</td>
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<td>MASK12</td>
<td>Fw 190A-8 Weekend</td>
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<td>Eduard</td>
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<td>HAS QUEEN ELIZABETH 1943 - PART II</td>
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<td>BIGED2</td>
<td>Do 215F-3 Nightfighter</td>
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<td>BRASSIN</td>
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<td>BRASSIN1</td>
<td>LAV-10/A ZUNI</td>
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<td>Italeri</td>
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<td>BRASSIN2</td>
<td>Mirage IIc wheels</td>
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<td>Italeri</td>
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<td>BRASSIN3</td>
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<td>BRASSIN4</td>
<td>Ju 88A wheels early</td>
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<td>REVELL</td>
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<td>BRASSIN8</td>
<td>Shackleton AEW.2 wheels</td>
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<td>BRASSIN9</td>
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<td>BRASSIN10</td>
<td>M2-29A weapons set</td>
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<td>OVERTREES</td>
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<td>OVERTREES1</td>
<td>Spitfire Mk.XVI Bubbletop w/ early wings</td>
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<td>OVERLEPT1</td>
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<td>Spitfire Mk.XVI Bubbletop</td>
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March 2016

INFO Eduard - March 2016
That drop tanks were used by the USAAF during the second half of the Second World War is a widely known fact. So much so that few modellers build their Mustangs and Thunderbolts without these items under the wings. What is less known, however, is the difficulty with which these items were incorporated and implemented by the US Air Corps.

As was the case with Hitler, the American leadership underestimated the significance of the need to extend the range of their fighters during the years of conflict, even before the US entered the war.

Germany had already gained some experience with jettisonable drop tanks on the He 51B-1 (which could carry a 50 litre, and in some cases, a 170 litre tank under the fuselage) during the Spanish Civil War. Early versions of the Stuka, the Ju 87R, were long range versions that could carry 300 litre drop tanks. In any case, the concept of the Blitzkrieg coupled with German overconfidence greatly underestimated the importance of drop tanks for the Bf 109E.

It was deemed common sense that ground
units would advance so quickly that the need for extended range fighters would not materialize. This is a mistake that came back to haunt the German leadership during the Battle of Britain. During the initial phases of the battle, when the Luftwaffe was able to bring the RAF to its knees, the inability to escort bombers deeper over the British isle became a factor. The Bf 109s could not endure after combat over London, or over the areas of Kent, Essex, Surrey or Hampshire, and needed to head back to their home fields.

The development of drop tanks and their associated modifications to the fuel system of the Bf 109, and other German aircraft, is itself a very interesting chapter (for example, a plywood tank began to be developed for the Bf 109E even before the invasion of France, despite early aversions to the idea) and will be covered in greater detail in future articles.

The American view on such matters paralleled the German one in some respects, and in some was typically American. The predominant view in 1939 was that American four engined heavy bombers would not be in need of escort fighters. They would be able to get themselves in and out of enemy territory, and would be able to protect themselves against enemy fighters. At the time, there was a very powerful movement in the USA that could, by today's standard, be deemed a 'lobby group' that came to be known as the 'Bomber Mafia'. This group's main goal centred around the pushing through of bomber production, mostly due to economic reasons. This lobby used all resources possi-
ble to divert government funds to companies that were involved in the production of bomber aircraft. It’s most effective resource was domestic propaganda, and was used to convince strategists and government leaders alike that the development of a strategic bomber capability, non-dependant on fighters, was the way to go. The disappointment that the USAAF must have felt on awakening from this pipe dream after committing the B-17 to the war in the Pacific, and especially to Europe, is a chapter in and of itself.

One consequence of being dazzled by the notion of heavy bomber impunity was the underestimation of the range of fighter aircraft which were viewed as assets more suited to a defensive or intercept role, and not requiring a far-reaching capability. The only real use of extra fuel tanks was seen as being for ferrying aircraft. This is very well illustrated by the development of extra tanks for the P-47 Thunderbolt. Their 200 gallon ‘ferry tanks’ were nicknamed ‘babies’ and were basically glued to the bottom of the aircraft for extended ferry flights. It wasn’t until 1943 when they were provisionally used under combat conditions.

But we should backtrack a bit for a couple of paragraphs. Attempts to increase fuel carriage, and subsequently range, were carried out in the USA (as elsewhere) through the twenties and thirties. The only viable course of action involved external fuel tanks, which had the disadvantage of negatively affecting aerodynamics and thus, paradoxically range and also maneuverability. Also, a danger were vapours in even empty tanks.

Ace of the 56th FG Col. Francis Gabreski in his P-47D s/n 42-26418. Flying this plane, he was lost over Germany and became POW on the 20th of July 1944, sixteen days after this photo was taken. Under the belly you can see a 150 gal flat tank.

For P-39 a P-400 a 75 gal drop shaped tank was typical, later modified for P-51. The P-400 on this photo is equipped with a 150 gal flat steel tank.

Group of P-39s jettisoned their drop tanks (Pacific area, 30. Nov. 1944)

Maximal possible additional fuel loading for the P-38 consisted of one 330 gal and one 165 gal fuel tank. This configuration was also prepared for Lightnings of the 347th FG participating on the special mission with aim to eliminate Admiral Yamamoto.
that were extremely combustible if hit by even one shell from an unfriendly aircraft during combat. Attention turned to a jettisonable item, that could be dropped when empty or in combat, and the fuel system could be switched to internal.

In February, 1939, Curtiss-Wright proposed the development and testing of a 52 gallon external fuel tank that could be mounted on their P-36C Hawk. The firm even addressed all questions concerning the integration of the external tanks to the fuel system. The concept was first taken by Army Material Command, but by April, they were removed from the upper levels of the Air Corps and questions regarding fire risk connected with this project, led to steps being implemented to stop it all together. Objections by Army Material Command, given that these were only tests and noting that security measures were in place, were initially accepted. However, in May, the Air Corps, led by an opponent of the concept of long range fighters, General H.H. Arnold, issued an order forbidding the use of external fuel tanks on any tactical aircraft.

Non interest on the part of the USAAF lasted until America’s entry into the war. Hard experience gained in combat in the Pacific, the Mediterranean and in Europe, especially as it pertained to the bomber offensive against Germany, validated support for the concept of long range fighters. Development of external tanks from non-strategic materials began, as did the development of external fuel tanks for non American customers. Long, 165 gallon teardrop shaped tanks, typical for the P-38 Lightning, were originally...
The 108 and 200 gal fuel tanks, made from impregnated paper, for the 8th USAAF were manufactured directly in England.

The steel or aluminum 75 gal tanks were either left in their natural color, or were over-sprayed by aluminum. The plane then carried a wide scale of metal shades and shines. Tones varied from natural aluminum fuselage, stainless steel around exhausts, to wing, fabric covered rudder and elevators... and drop tanks. A good inspiration for modellers.

Preparation of the 108 gal drop tanks from impregnated paper. The red lines helped the ground crew to place the support strips and rack adaptors into a correct position.

Significant media and tactical support for the idea of external fuel tanks resulted in the implementation of Operation Vengeance on April 18, 1943, involving the use of 18 Lightnings on a flight of over 1,000 miles on a mission to eliminate Japanese Admiral Isoroku Yamamoto. This required the maximum possible underslung quantity of fuel, and each of the aircraft carried one 330 and one 165 gallon fuel tank (for a total of 1820 litres of fuel in external tanks).

A more pronounced, and more tragic, milestone was achieved by the mission conducted by the 8th USAAF against Schweinfurt/Regensburg on August 17, 1943. VIII Bomber
Command dispatched 376 B-17Fs escorted by 268 P-47s with the support of 191 Spitfires of the RAF. Without external tanks, the fighters could only escort their bigger brothers to the German border. Although the escort was useful at least over Belgium, where the escort fighters accounted for 32 Luftwaffe aircraft, sixty unescorted bombers ended up being lost, with another hundred being heavily damaged. For the USAAF it was a serious blow, from both a military and political point of view. The disastrous aspects of the raid were fuel for opponents of strategic bombing and led to its virtual end. A significant reason for the outcome was the inability of the escort fighters to stay with the bomber formations.

After this episode, external fuel tanks began to be distributed at a much higher tempo. It was not limited to the European theatre, but extended also to the MTO and the Pacific (including the US Navy).

For the P-47, who’s standard operational range took it as far as the German-Belgian border, a 108 gallon under fuselage tank meant reaching Bremen or Wilhelmshaven (about 320 miles), and with two 75 gallon underwing tanks Frankfurt (some 370 miles). With two 150 gallon tanks, the operational radius increased to include Magdeburg and Schweinfurt (about 450 miles).

With the P-38J, the use of two 165 gallon tanks could allow for the radius to be some 600 miles, theoretically reaching Prague. However, by the time the Allies were able to operate over eastern Germany and the Protectorate, the escort mission ceased being the domain of the Lightning and the Thunderbolt.
It was not only staying with the bombers that was needed, but also to effectively protect them. This is where the older aircraft types of the USAAF began to limp, and could not effectively keep up with enemy assets.

Enter the P-51 Mustang. The first true series version of this thoroughbred, the P-51B, was able to escort the bombers with two 75 gallon drop tanks, depending on conditions while maintaining operational performance, up to 470-580 miles (Berlin, Prague). Fuel consumption was significantly lower than the P-38 or P-47, and this had an effect on range. Later P-51Ds, with two 108 gallon tanks could fly 1,650 miles (under non-combat conditions), giving a radius of some 800 miles. During, Operation Frantic, a mission where the bombers did not return to their field, but rather continued east and landed in the Ukraine, the Mustangs were required to land at a base in Piryatin, 84 miles from Kiev. This amounted to a combat flight exceeding 1400 miles, which the Mustangs, with two 108 gallon wing tanks, completed after a flight of around 6.5 hours.

For the final sixteen months of the war, external fuel tanks were a necessity for escorting fighters. Young pilots that were reaching Europe to complete their tour of duty more likely than not had no idea of the complicated road that the concept of the drop tank took to become the familiar item they became accustomed to.
A large mission was undertaken by the 8th and 15th USAAF, and their combined strength exceeded 1,000 bombers over the continent, which meant over 500 escort fighters were needed. Every day, the allies not only dropped tons of bombs on Germany and the occupied countries, but also hundreds of drop tanks as well. They were very useful items of which much was asked, and had to be made of materials low on the priority list and be cheap.

The initial material used for auxiliary fuel tanks that went to the USAF were aluminum. That, of course, soon became a luxury item, and these tanks were then made from thin steel plate. A technological gem was the drop tank that was made from pressed paper, manufactured mainly in Great Britain. They came in two common sizes, 108 and 200 gallons. For the P-51, the most common tank used, besides the 108 gallon paper item, was a 75 gallon metal tank in the Pacific and the MTO. Underwing 110 gallon metal tanks were also seen, and 165 gallon underwing tanks were used that were originally intended for the P-38, but these were a rarity. The P-47 used the same tanks as those described for the P-51, and also more often flew with a paper 200 gallon tank. Oddities for the P-47 were under fuselage 200 gallon metal tanks with a flattened profile. P-38s most often used the underwing 165 gallon tank, and, to a lesser extent, tanks of 330 gallon volume.

The four engined heavy bombers also had their auxiliary tanks. For example, the B-17 used an 820 gallon tank placed in the bomb bay.

From a modelling point of view, the colouring of the tanks is a relevant feature. While the original aluminum tanks remained in their natural colour, which could attain a highly reflective finish, they could also have been painted grey to match the undersides of the aircraft. Tanks carried by Navy and Marine aircraft could even have been in Navy Blue and Non-specular White. Later paper and steel tanks were typically sprayed aluminum.

The birth of the concept of the auxiliary drop tank for aircraft of the USAF and the US Air Corps was very complicated, and even more complicated was its realization into reality, as it often is with “minor” details that end up having a massive bearing on much larger things. And with the significance of the drop tank on American fighters, this idea applies many fold.

In the immediate post war era, the tanks remained a common fixture of fighter aircraft and continue to serve today, although their significance has at least partially been offset by in-flight refuelling practices. Despite today’s character of the tactical use of air assets having changed from days gone by, no one doubts the advantage of the longest possible range of an aircraft. The principle remains, even if the paper tank does not...

Sources:
Deconstructing the P-51 Mustang Historical Narrative, Trent Telenko (Chicagoboyz, History Friday), 2013
MacArthur’s Fighter Drop Tanks, Trent Telenko (Chicagoboyz, History Friday), 2013
National Archives and Record Administration
20th FG Operational Summary and Mission Reports (NARA)
Foto/Photos: National Archives and Record Administration, 55th FG, Museum of Air battle over the Ore Mountains on September 11th, 1944
P-51 and P-47 operation, erection and maintenance manuals
Eduard archive
US external tanks were sometimes used not only as drop tanks, but for various purposes, both - official army related but also unofficial. Following gallery introduces some of them.

For special operations, napalm was also used in Europe. Armorers are loading napalm bombs into the bomb bay of B-17G 42-39970 from the 452nd BG. Their targets were German troops resisting in Bordeaux area.

P-38s jettison 165 gal drop tanks over Philippine Islands. Those tanks do not contain almost harmless remnants of the aviation fuel, but napalm... (Summer 1945).

Ground crew of the 318th FG on Saipan, Marianas Islands is filling the 165 gal tanks on a P-47 with an extremely flammable mixture of aviation petrol and napalm ("gel gas"). So the tank typical for P-38s became a very dangerous weapon (Saipan, July 1944).
Those modified 330 gal drop tanks transformed a P-58 into a flying ambulance (7th USAAF, Hawaii and Caroline Islands, 1945).
Airplane drop tanks in hands of skillful ground crews could turn into various vehicles for ground and water... By the way, in early post war years also many of the tanks, left by USAAF in countries where they were dropped, were turned into various runabouts, by the local civilians.

**RECOMMENDED:**

- US 75gal metal drop tanks
- US 108gal paper tanks

Cat. No. 648238

Cat. No. 648233
Fw 190A-8 1/72

built by Petr Zatřepálek
This aircraft served with the test unit Jagdgruppe 10. The task of JGr.10 was to test new tactics and weapons to be used against Allied four-engined heavy bombers. The aircraft could be easily identified thanks to the rendition of a red and yellow snake on both sides of the fuselage. The pictured aircraft was reassigned to II./JG 300 and received relevant identifying markings, such as the blue and white band identifying JG 300 within the Defense of the Reich system. There was also the black horizontal stripe of the II. Gruppe. This stripe partially obscured the code II, which belonged to JGr.10. On the left side, this allowed the letter I to remain visible, and the number 1 on the right. This aircraft was dismantled and its remains found in May, 1945 at Bayreuth-Bindlach, which served as a repair and conversion depot from 1944.
A-6A Intruder 1/48 (Hobby Boss) with Eduard Goodies

A-6A interior S.A.
Cat. No. 49683

A-6A exterior
Cat. No. 48807

A-6 electronic equipment
Cat. No. 48865

built by Jan Novotný
Cat. No. 648193

A-6 wheels
Cat. No. 648193

MER
Cat. No. 648227

Mk.82 bomb w/ airbrake late
Cat. No. 648137

Remove before flight
Cat. No. 49068
F-104 C2 ejection seat
Cat. No. 632047

F-104 MB.7 ejection seat
Cat. No. 632048
F-104 undercarriage wheels early
Cat. No. 632045

F-104 undercarriage wheels late
Cat. No. 632046

F-104 exhaust nozzle early
Cat. No. 632043

F-104 exhaust nozzle late
Cat. No. 632044
ON APPROACH

NEXT MONTH... April 2016

BIGED (April)
- BIG5335 Z-32 destroyer 1/350 Dragon
- BIG3360 A.S. 51 Horsa Glider Mk.I 1/35 BroncoModels
- BIG3361 P-39Q/N Part. I 1/32 KittyHawk
- BIG49146 Pe-2 1/48 Zvezda
- BIG72108 MiG-29A Izdeliye 9-12 1/72 Trumpeter

BRASSIN (April)
- 632072 GBU-12 bomb 1/32
- 632078 Mosquito F8 Mk.VI gun bay 1/32 Tamiya
- 648239 Bf 109G-6 radio compartment 1/48 Eduard
- 648240 Bf 109G-6 cockpit 1/48 Eduard
- 648245 W.Gr.21 for Bf 109 1/48 Eduard
- 648246 Bf 109 cannon pods 1/48 Eduard
- 648247 Bf 109G exhaust stacks 1/48 Eduard
- 648248 MiG-31 wheels 1/48 AMK
- 648253 F-4J wheels 1/48 Academy
- 648254 F-4J exhaust nozzles 1/48 Academy
- 672102 UB-16 rocket pods 1/72
- 672103 UB-32 rocket pods 1/72

BIGSIN (April)
- SIN67208 MiG-29A IZDELIYE 9-12 1/72 Trumpeter

INFO Eduard - March 2016
632078  Mosquito F8 Mk.VI gun bay  
1/32  Tamiya

648239  Bf 109G-6 radio compartment  
1/48  Eduard

648245  W.Gr.21 for Bf 109  
1/48  Eduard

648246  Bf 109 cannon pods  
1/48  Eduard

648247  Bf 109G exhaust stacks  
1/48  Eduard

648248  MiG-31 wheels  
1/48  AMK
648253  F-4J wheels  1/48  Academy
648254  F-4J exhaust nozzles  1/48  Academy
672102  UB-16 rocket pods  1/72
672103  UB-32 rocket pods  1/72
648240  Bf 109G-6 cockpit  1/48  Eduard
ON APPROACH
Kits April 2016

 MODELY
(Prosinec)

ON APPROACH
Kits April 2016

NEW TOOL
2016

1/48 scale

PHOTO-ECHTED SETS

33237 A-6E TRAM exterior
33238 A-6E TRAM undercarriage
33263 A-6E TRAM interior
33264 A-6E TRAM seatbelts
48882 Meteor F.8 undercarriage
48883 Meteor F.8 engines
48884 Meteor F.8 landing flaps
48885 BF 109G-6
48886 Su-7 exterior
48887 Sea Harrier FR.S.1 exterior
49003 BF 109G seatbelts FABRIC
49004 BF 109G seatbelts SUPERFABRIC
49765 Meteor F.8 interior
49766 J-29F Tunnan
49767 Me 262B-1a/U1
49768 Bf 109G-6 late series
49769 Sea Harrier FR.S.1 interior
53158 German Submarine Type IX C/40 hull pt. 1
53159 German Submarine Type IX C/40 hull pt. 2
53160 German Submarine Type IX C/40 tower
53161 UN Kagero pt.1
53162 UN Kagero pt.2
73550 Hawk T.1
73551 Sea Vixen FAW.2

1/32 Trumpeter
1/32 Trumpeter
1/32 Trumpeter
1/48 Airfix
1/48 Airfix
1/48 Airfix
1/48 Eduard
1/48 Eduard
1/48 Eduard
1/48 Eduard
1/48 Eduard
1/48 Eduard
1/48 Eduard
1/2 Revell
1/2 Revell
1/2 Revell
1/2 Revell
1/350 Tamiya
1/350 Tamiya
1/72 Cyber Hobby

ZOOMS

B3157 A-6E TRAM interior
FE655 Meteor F.8
FE755 J-29F Tunnan
FE767 Su-7
FE768 Me 262B-1a/U1
FE769 Sea Harrier FR.S.1 interior
SS550 Hawk T.1
SS551 Sea Vixen FAW.2
SS552 Fokker E.II Einkecker
SS553 RAF BE.2c Nightfighter
SS554 F6F-5N Weekend

1/32 Trumpeter
1/48 Airfix
1/48 Hobby Boss
1/48 Eduard
1/48 Hobby Boss
1/48 Kinetic
1/48 Eduard
1/72 Revell
1/72 Cyber Hobby
1/72 Airfix
1/72 F6F-5N Weekend

OVERLEPT

B82111X BF 109G-6 late series

OVERLEPT

B82111-LEPT1 BF 109G-6 late series

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