# L'Aigle - Dragon Number 1 and 2 

## CERF - VOLANT PLANEUR

## High Flying Eagle Soaring Kite




L'Aigle Dragon seen from the rear side

First of all, I must inform the reader that my native language is Dutch. I learned English at school and I use it in my professional life almost every working day. Still, it is without any doubt that for native English readers it will be obvious that this report is written by a foreigner. I do not apologize for spelling and grammar errors; I simply ask the reader not to be concerned by this. It's the content that counts.

## $\infty$ INTRODUCTION $\infty$

Like many people, I am fascinated by kites, and, more specifically, classic kites. Kites once played an important role in the Western world for scientists, the military and for commercial use. My main interest covers the period from 1748 - the first documented meteorological use of a kite - up until 1960.

After 1960, the professional use of kites ceased completely and the kite changed into what it has always been, a children's toy. Although nowadays many grown-ups play with kites, and some of them even earn a living from them.
The "professional" kite is once again in the picture - to be used by (sail)boats, tested as an energy source and used for experiments in the upper air at high altitudes. However, one may say that in general the kite nowadays is a hobby.

I collect kite material, books, papers, photos, winders and old kites. And most of all, I study the material carefully to gain in-depth knowledge about classic kites and to preserve this knowledge for the future. Sharing this knowledge is an essential part of my hobby.

A while ago I received a tip about an old kite that was for sale in the southern part of The Netherlands. I decided to buy the kite, with Drachen Foundation as the owner, and to make sure it would be carefully preserved for the future. Drachen Foundation made this possible, for which I want to thank them. They not only agreed to take care of the French bird kite but also asked me to document the kite by making a dimensional sketch, to take pictures and to write a description. I was asked to do research, if possible, on the history of the kite. The following report with enclosed material is the result.

$\infty$ HISTORY AND ORIGIN $\infty$

L'Aigle Dragon, the High Flying Eagle, is a look-alike kite, difficult to distinguish from a bird of prey. It will lift in the lightest breeze and a simple self-regulating bridle makes it possible to withstand strong winds. Its pull is very light and it can therefore be attached to any anchor. It flies to a great height with a remarkable flying angle. It can be broken down quickly and can be folded into a sleeve of 90 cm height and 8 cm diameter. The kite has a 150 cm span when fully assembled.
The price was seven French francs, with an additional charge of 0.60 francs for delivery anywhere in France.

This is what we can read in the advertisement that offers this kite for sale. I found the advertisement in the French magazine Le Cerf-Volant, number 12, July 1910.


Advertisement Le Cerf-Volant July 1910

As we can see, the kite was for sale at a shop called L'Aéronautique, which is a shortened name for Libraire Aéronautique, translated as Aeronautical Library.


Opening announcement L'Aéronautique
The address was 33, rue Madame, Paris (VIe). L'Aéronautique was the shop next to 32, rue Madame Paris, the address of the magazine Le Cerf-Volant. The first issue of Le CerfVolant was dated August 1909. This magazine was mainly devoted to kites, but gave some space to model airplanes and aerial photography by kites. The success and response was so huge that the editors decided to open an aeronautical shop next door. An announcement in Le Cerf-Volant shows us the official opening was on June 10, 1910.

## Note:

When I go through the issues of Le Cerf-Volant and see the advertisements I can see that sometimes the number in rue Madame is printed as 32 and sometimes as 33.

The shop became very well-known amongst all kite flyers of the time, especially the French. It sold motors and propellors for model airplanes, complete kites and other air toys. One could buy all accessories needed to build model airplanes andkites. The shop sold kite books and books relating to aircraft in general, and these books were promoted in several advertisements. Our L'Aigle Dragon was one of the kites that was sold through L'Aéronautique. Since I did not find any further advertisements and no other reports or articles in any other magazine I have been gone through, it is likely to assume the kite was produced in 1910.


Advertisement for two kite books

## $\infty$ WHAT IS LEFT OF L'AÉRONAUTIQUE? $\infty$

The shop was once a center of knowledge, where professional and amateur kite flyers mingled, bought material and books and exchanged information. Festivals and kite events were announced from here. I wish I had lived there 100 years ago; this is one of my dreams.


In front of 33, Rue Madam, Paris, 1910
To find traces of its history, I decided to visit the address in September 2006. Nowadays a hairdresser occupies the premises. Nothing inside or outside the shop shows us anything that reminds about this fascinating period driven by L'Aéronautique and other similar shops and organisations. The hairdresser's is in the corner building of 33 Rue Madame. The shop owner knew nothing about the history of the space he rented nor anything about the history of the building. He was surprised by my question.


Rue Madame in 2006


In front of 33, Rue Madam, Paris 2006
I was advised to go to the district office of the town hall. Like many bigger cities, Paris is split into sectors and Rue Madame is located in the $6^{\text {eme }}$ arrondissement, the $6^{\text {th }}$ sector. Every sector has its own local town hall, as part of the city government, to take care of the sector's administration and provide offices for the local authorities. The building also includes the archive related to the $6^{\text {eme }}$ arrondissement.

I had anticipated that this archive would be very interesting for me to visit. I hoped to find such things as pictures, documents, official papers, cadastral sketches or newspaper cuttings that showed me information about 33 Rue Madame. Although I spent many hours there, with the helpful assistance of various clerks and officials, unfortunately nothing in the archive was found that could show me what 33, Rue Madame once was.

One older clerk told me that part of the archive was once destroyed by fire. I could not check if what he told me was true or whether he said it to discourage further searching.

Even after completing this report I will keep a close watch on the history and origin of the L'Aigle Dragon. Research on the origin of kites, the kite builders, the kite organisations and the locations will be on-going..

Later on, back home, I found a second address for the L'Aéronautique, from where the same activities were initiated. The issue of Le Cerf-Volant of May 1911 shows another address, 40 rue de Seine, Paris, while Le Cerf-Volant issue April 1911 was still edited from rue Madame. An advertisement for a kite book in the same issue also shows the new address for Libraire Aéronautique. Apparently they moved and stayed there until at least June 1912. I must make time to go back to Paris, visit this second address and some aeronautical archives, trying to find traces of L'Aigle Dragon. For this report and the description of the kite, it was not possible.

## $\infty$ DESCRIPTION OF THE KITE $\infty$

L'Aigle Dragon (High Flying Eagle) is supposed to look like a bird. When flying up in the air it looks like a bird of prey. The kite was developed to be used with different purposes. A hunter could use it to flush out pheasants, partridges and other birds that could be hunted down. Farmers and gardeners would use the kite to chase away birds that would eat fruit or crops. The kite must have been bought for fun flying, too, since it had a wide wind range and a steep flying angle.

The kite in its actual condition was repaired once or even more. For example, one can see hand-made stitches on the center of the cloth were it must have been torn. To be accurate, I have described and sketched the kite in the condition it is in now, including all the repairs which have been made. Although I recently traced another example of the same kite, documenting the first bird kite, as it was found, was my intention.


The zinc tube in which the kite was bought, not the original cover to transport
The kite was bought in a metal tube, but this was not originally made for the kite. The advertisement describes a cover of 90 cm length and 8 cm diameter. The tube is a zinc pipe with soldered bottom and lid and a cloth carrying strap.

[^0]The second bird kite I was able to get on loan from a private collection. It was minus the head but since no repairs had been made I have only used the kite to describe the differences between the original and the repaired kite, where this was relevant. The only repair made on this second kite was replacing the tension lines and bridle lines. This was done incorrectly, by someone who did not know the kite and probably never flew it.


A second L'Aigle Dragon without head, rear side view

Back to our L'Aigle Dragon, including alterations made, that is described in the following chapter.


Dimensional sketch is seperately included in this report

The kite is built from different material:

1. Frame of wood: to give shape, stiffness and strength
2. Cloth: as carrying surface
3. Metal: connecting center block to frame and head to body
4. Linen tape: connecting two verticals and central block
5. Glue: to glue the cloth to the frame and tail to body
6. Printing ink: to print the bird sketch on the cloth
7. Hemp line: tension lines in the frame and bridle lines

Details of used material:

## 1. Frame of wood

The original frame in the kite was made out of softwood, probably pine.
This wood was replaced by a second wood, a little thicker, but also a softwood. The crosssection of the frame parts is $15 \times 5 \mathrm{~mm}$. Like any wood in any kite, it is free of knots and has long grain alongside the length of each piece.
The frame has seven parts: two vertical parts, two horizontal spars, a central spreader and two pieces of wood to make the center block.
The two vertical spars, $1 / 3$ as upper part joining together, $2 / 3$ as lower part spreading up, were originally connected by using a strip of the same cloth the body was made of that was glued around it on top and on $1 / 3$ from the top. In "our" kite this has been
replaced by linen tape. The same was done with the wooden center block. It was taped around, instead of a piece of cloth being used.
The two horizontal parts are fixed on the wings with glue.
A horizontal middle spreader is used to spread the two wings. The ends are narrowed down to fit more easily in two pockets, made on each of the two wings.
Two pieces of wood, each 30 mm long and with a triangular profile, are fixed left and right of the two parallel vertical spreaders, some 120 mm from the top. They are fixed in place by self-adhesive linen tape.

## 2. Cloth

The cloth of the kite is a yellow-brownish, sand-coloured cotton. It's not extremely tightly woven, and is very thin and light. The weaving pattern is $25 \times 30$ threads per $\mathrm{cm}^{2}$. The cloth has no needlework in it. It is cut out and used unhemmed. Straight edges are glued on the frame, open edges are cut out in a waving pattern, following the edges of the print of a feather pattern. Cloth cut out in circular lines will not easily fray, even when fluttering in the wind. This is a clever and good-looking solution, which was also chosen to reduce production time.
The head is separately mounted from the body. In our kite it was stiffened by glueing a piece of white cotton on its rear side. An extra piece of cloth tape connects the kite with the top of the two vertical spars, while two split pins connect the left and right lower parts to the main body. Where the split pins pass through the cloth, reinforcing is glued on the cloth.
The cloth was glued over the frame on both upper sides of the wings and the tail was repaired in the same way. Traces of white, dried glue is still visible on these surfaces.

## 3. Metal

The two horizontal wooden wing spars are screwed in the central block by means of two metal screws with a maximum length of $10-12 \mathrm{~mm}$. This way, the horizontal spars are fixed and can turn upwards when spreading the wings or turn downwards when breaking down the kite.
As mentioned, two brass split pins are used to fix the head to the body.

## 4. Linen tape

White self-adhesive tape is used to connect the two vertical spars in two places and the center block.

## 5. Glue

The glue used is difficult to define. Since it turns white after drying, it would not have been a textile glue. It's more likely to have been an ordinary multi-purpose hobby glue.

## 6. Printing ink

The cloth and head have a look-alike print on them. The technique used was the same as commonly used for textile printing. Only black ink was used and the print is a detailed
sketch of a bird of prey, obviously done by a professional designer. It was an impressive sketch that was made to print on the cloth, and one can see different feather patterns, with smaller feathers in the tail and head, and two big, open claws in the middle complete the design. On the lower edges of the wings and the tail, the feathers are half-circular, so no stitching was needed and the silhouette was more clearly that of a bird in the sky.

## 7. Hemp line

The frame has five tension lines to keep the kite in shape when flying and to increase its strength. Two lines on each outer end of the wings are connected to the lower tips of the two vertical spars. Two lines are connected from the two horizontal sticks close to the center block to approximately $1 / 3$ from the end of the two vertical sticks. When spreading the wings, these lines spread the tail. The spreading distance is limited by a fifth line. The bridle has three lines, one from the head and two from $1 / 3$ of the lower end of the two vertical sticks.
The advertisement describes the bridle as self adjusting. How it works is not explained. It only says "simple". Most likely the two lower lines slide over the upper line when, under increasing pressure of wind, the flying angle alters. When the wind decreases, the kite will go back to a more upright flying angle and the two lower lines slide back again.

On the next pages, pictures of the kite give more information.


Frontside overview


Rear side overview


Head poimting forward by bridle


Tail end


Claws printed on the cloth


Feather pattern printed on wings


Overview frame seen from the rear side


Tape around two vertical spars


Tape around two vertical spars


Selfadhesive tape around two vertical spars just before they spread


End of one of the two horizontal sticks


Cloth is glued around all sticks


End of middle spreader is tapered


Tapered spreader in pocket


Tension line connected at the tip of the wing spar


The head is separated from the body


Head pointing forward when flying


Head connected to vertical sticks and body cloth


The head is separated from the body


Cloth tape to connect head to frame


Split pin from the rear side


Center block connected with two screws (here a photo was taken of the second original kite, on which the screws were visible; in the described kite the screws are covered by the tape)


Split pin from the front side


Tape around center block


Printing on the cloth


Printing feather pattern on the cloth


Claws spread wide open


Detailed sketch of open claw on the cloth


Five tension lines


Tension line connected to the tip of one of the wing spars


Lowest middle tension line under the tail piece


One of the two vertical tension lines fixed on one of the wing spars


The two middle tension lines fixed to the lower part of the two vertical spars


The two middle tension lines fixed to the lower part of the two vertical spars; from here the two lower bridle lines come forward


The 2 lower bridle lines seen from the front


The upper bridle line fixed on the nose of the head


Frontside overview


Rear side overview


Top of the kite - head missing


Tension line left under to tail


Claws printed on the cloth


All details are basically the same as in kite 3 and kite 4

Since the kite was built around 1910, there are not many examples preserved, and the frame and bridling system are not the original ones, I did not dare to risk actually flying the kite. I do this very rarely with original kites. As mentioned before, when one wants to fly the kite it is better to construct a replica..

The report is accompanied by a USB containing all pictures shown in this report, plus extra pictures taken from the described L'Aigle Dragon. A dimensional sketch in .JPG form and also as a .dwg file is included on the USB. The final report, as printed, completes the USB.

A report is never complete, even after it is finished. More investigation and new discoveries will add information to what has been described here.

The reader is free to correct the contents and sent me additional information on the subject described.

Diemen, March 2007
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# L'Aigle - Dragon Number 3 and 4 

CERF - VOLANT PLANEUR

## High Flying Eagle Soaring Kite



In November 2009 I was included in an e-mail that reported the discovery of a kite that was shaped like a bird. It was mr. Bernhard Dingwerths from Kassel Germany who sent out this e-mail.

He asked the receivers of this e-mail:"What to do with it?" Bernard was directly aware of the fact that he found a unique kite, of which only a few are preserved. The question he raised has been raised and will be raised many times by most of the (serious) kite collectors. What happens with my stuff when I am no longer here? We have not found a satisfying answer to this and we continue speaking about it and searching for a solution to preserve kite collections in a professional way. Not only for the collectors of tomorrow but also for many years from now.

I was choosen to receive the kite for further investigation. Thank you Bernhard. At the same time I was asked to find out if it was wise and possible to repair the kite and bring it back to its original construction. Although I dislike the idea of repairing kites and prefer to keep them as they are found, in this case an exception on my principle was made. Because it was the owner who asked me to do some basic repairs and make it possible to have the kite displayed.

I received the kite in december 2009. It is always a pleasant moment to receive a box over the mail, knowing a kite is in it. After opening the box I am very careful and enjoy looking, smelling and touching the material.

The general condition was:

- Cloth looked good - no stains - some small holes at edges - worn out at the bottom of the wings where the kite shows it has been flown for many hours.
- Frame still original - one broken wing stick
- Head - missing
- Tension lines - replaced and incorrectly mounted
- Bridle - missing
- Packing - the kite came with an old green tube - not the original that came with the kite - in fact the kite was not sold in a tube but in eather a kite bag or a cardboard box. The green tube was for papers, not for kites.

I contacted Bernhard and we agreed upon repairs that allow the kite to be able to be on display again.

As in kite number 1 and kite number 2 the wing spars in kite number 3 are glued into the upper edge of both left and right wing. The right wing was broken, the remainings still in place. The breaking has also damaged the cloth and made a small opening in the front.

Since the glue was completely dried out it took a careful job to open the glued tunnel and make the fracture of the right wing spar visible. With a surgical knife and patience I managed to open the cloth over a distance of 10 cm without damaging or tearing the cloth. The broken spot was actually a good fracture. Not much loose splinters and the remaining parts fitted well together. I decided not to replace the stick, but repair it by means of a splint. The splint was made of very thin wood. I made two suitable pieces to be glued on both ends of the fracture. No extra bindings to re-enforce - it was not supposed to fly agian.

After that the repair was still thin enough to fold the cloth back over the stick again and fix it with special glue for textiles. The result even pleases me. If one does not know it is hardly visible.


You can see the damage in the cloth caused by the broken stick - the repair itself is hardly visible

I still had in loan kite number 1 - the Drachen Foundation kite. This is the only kite that still had its original head. With that as an example I was able to make a new head. I decided to make three heads - one for kite number 3 - the one we are working on right now - 1 for kite number 4 - the dutch version - and 1 for kite number 2 - the kite shown on page 10 of this report.

For that I made a digital file of the printing of the pattern of feathers of the cloth of the head. This pattern was than printed on a piece of cloth. This printed piece of cloth was than glued on a piece of ecru, somewhat thicker quality, cotton, including a piece of twill edge banding. This twill edge banding is needed to slide the head over the vertical middle frame piece. All this together is the best way to recreate the original head.

Digitising and printing a cloth pattern is impossible without having differences in the original colour and the final result. The colours always fade away somewhat. In this project I find that acceptable, since we do not want to give the future watchers the impression the head is original. It is added later on and it should look like being added later on.


The new head seen from one side
In kites number 1,2 and 4 the right and left upper wing spar has extra holes to fix the head with brass split pins. This kite has not such holes. I keep wondering why not ? I did not dear to drill extra holes in it. I decided to fix both lower corners of the header with a piece of hemp line to both middle tension lines.


The new head seen from the back side - the white cloth is ecru cotton

The next step is looking into the tension lines and bridle lines. I used the advertisement see page number 4 - and kite number 1 as reference point. I am also familar with this type of kites which are well described in detail in older kite books and magazines.

For this kind of repairs I use old hemp line. In my collection I have old kite line winders that have a good quality hemp on it of different thickness. The 1 mm looked suitable. I removed all tension lines and replaced them by the old hemp. I also put them in the right place. Now when the kite is stretched the tension lines shape and support the kite in the right way. The avertisement on page 4 shows the correct bridling. This was copied on the kite.

The new head made it impossible to put it back in the green tube again without the risk of damaging it. It was very common in those days to sell a kite in a suitebale bag (as described in teh advertisement) or in a cardboard box if the kite was exported. I have kites in my collection still in the original box.

I asked a box maker - my wife Inge also makes boxes - to make a box that would be strong enough and would be big enough to store the kite in a proper way. The box shouldn't look too new and modern.
The box was made, with lid and finished on the outside with oldfashioned packing paper and on the inside with special grey/white paper also in use for book repairs. According my standards the results are very good and this box completes the repairs.


Kite with green tube - te kite does not fit in after the repairs


Kite in the new cardboard box- fits perfectly and looks good

## $\infty$ DIMENSIONS $\infty$

The kite has exactly the same dimensions as on the enclosed drawing. No need to make a new drawing. I just added one detail, the cross section of frame and spreader.

The frame is original - as mentioned before this is not the case in kite number 1 - and is smaller and thinner than in kite number 1.
The dimensions of all fixed sticks are 12 mm width and 3 mm thickness.
The spreader, that can be taken out for transport and storage, is 13 mm width and has a thickness of 4 mm .
All wood looks like pine.


Front side overview


Rear side overview


Head seen from the rear with upper bridle point


Tail end


Middle with splitting point and cross spar


Fixation of two middle tension lines


Left pocket to catch the spreader


Middle wooden block - left and right wings hinges


Detail of the head attached to the vertical spar with twill tape


Fixation of the right middle tension line to the wing spar


Fixation of the left middle tension line to the wing spar


Right pocket to catch the spreader - just left from where the wing spar was broken


Fixation of the right tension line between tail and lower end of the wing spar


New head - on purpose made different to show it has been remade


Kite with green transport and storage tube


Kite with new box for storage and transport


Kite with new box for storage and transport


Box closed and case closed

More than 5 years ago I was walking through one of the eldest parts of Amsterdam when I noticed a shop window showing old toys. I rang the bell and shared my curiosity with the house owner. The house used to be an old toy shop, bought by the present owner, who used it as his house to live in. He kept the shop window in its original design, giving the house a nice look from the street side.

The house owner also mentioned what he found back on the loft when he was cleaning the house. Amongst all this a kite was found back. The owner did not want to sell it, it was supposed to be in his shop window one day. He asked an extreme high price for it. I was permitted to take pictures of it, nothing more at that time. I told him I would come back from time to time and ask him again if the kite would be for sale.

A couple of years later I met the same man on a book sale market. He told me he still owned the kite and that he now focussed on selling second hand books only. The kite never made it to the shop window. He did remember me well and offered me the kite for sale. For a very reasonable price this time. I told him it was to cheap, but he found the price was ok to him.

That is how I came in possession of the dutch version of L'Aigle Dragon. This kite has exactly the same size, shape, construction and frame dimensions. The only difference is the cloth and the printing pattern.

The cloth is of a much stiffer quality, compared with the three other kites. The printing is much lighter and on the front side the word SPERWER is printed. SPERWER is the dutch name for a bird of prey, named SPARROW-HAWK.

The kite came with an old wooden box, with metal grip and closing hooks. Not the original transport case, but very good to store the old kite. Dark and dry storage.


Old wooden box and repaired kite with new head and spreader.

The kite itself had no head and, like in kite number 3, the tension lines were incorrectly fixed or missing. The spreader was also missing.

The remaining of the fixation of the head was still there, two brass split pins - one in each of the wing spars.

I made the same head as made for kite number 3 and was able to fix it like the original head was once fixed, making use of the two split pins that I could open, remove and put them back again without breaking. Old metal usually breaks when it is bended - lucky me I guess!

I also used the same 1 mm old hemp line as I used for kite number 3, to bring the tension lines in its original position.

For this kite I decided not to add the bridle lines.
I cut out a new spreader, made out of bamboo, to be able to put the kite on display.
Since the kite is exactly the same, apart from the cloth and the printing on to it, I assume the kite was made in The Netherlands with the L'Aigle Dragon as reference point. Or made by the same French company for the Dutch market. It can be roughly dated between 1913 and 1930. The printing cannot be done by an amateur kiter; a kite producing company must have been the manufacturer. Which one is for now a question mark.


Front side overview - head is new


Rear side overview - head is new


Head seen from the rear


Middle with splitting point and new bamboo cross spar


Tail


Fixation of left middle tension line and backside of the brass split pin of the head.


Fixation of the left tension line between tail and lower end of the wing spar


Fixation of right middle tension line and backside of the brass split pin of the head.


Front view of the head attached to the vertical spar with twill tape and to the wing spars with brass split pins


Right brass split pin


Left brass split pin


Fixation of the left tension line between tail and lower end of the wing spar


Fixation of the right tension line between tail and lower end of the wing spar


Detail of left claw print


Detail of right and left claw print


Print SPERWER - SPARROW-HAWK


Kite with old wooden box for storage and transport


Kite in the wooden box - fits well


Box closed and case closed

## $\infty$ CONCLUSIONS JUNE $2010 \infty$

The report is accompanied by a USB containing all pictures shown in this report, plus extra pictures taken from all 4 kites $-3 \times$ L'Aigle Dragon and $1 \times$ SPERWER.
A dimensional sketch in *.JPG form and also as a *.dwg file is included on the USB. The final report, as printed, completes the USB.

A report is never complete, even after it is finished. More investigation and new discoveries will add information to what has been described here.

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$\infty$ NOTES $\infty$
Kite number 1 is owned by Drachen Foundation from Seattle USA
Kite number 2 is owned by Heinz Pieper form Bückeburg Germany
Kite number 3 is owned by Bernhard Dingwerths from Kassel Germany
Kite number 4 is owned by Frits Sauvé from Diemen The Netherlands


[^0]:    Note:
    Only in exceptional circumstances should one repair an old kite. The old original kites that we sometimes find have gone through a history of buying, flying, storing, repairing, flying again, getting lost, resurfacing when cleaning up, throwing away and finding again. Occasionally a kite will get into the hands of a kite material collector. The condition of the kite and the way it looks when it is added to a collection is a record of its history that should be preserved and not restored to its original condition.
    If one wants to fly a classic kite, one should build a second kite, as a replica of the original

