Schrauber & Sammler

Magazin für die Freunde des Metallbaukastens.

Ich schraube, also bin ich. Nr. 21 Winter 2021

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Next meeting of the Freundeskreis Metallbaukasten:

The annual meeting will take place again in Bebra, in the Hotel Sonnenblick.

www.sonnenblick.de

Geplant

The date is October 13-16, 2022.

Further information is available from Andreas Köppe at:
Thale_Schraub@web.de

A few words about this issue.

Dear readers, dear screwdrivers and collectors, dear metal construction kit friends,

You just have the latest issue of our magazine for friends of the metal construction kit on your screen. Five years ago I very modestly brought out a sample booklet and just waited for the reactions. We are now at the 21st issue and in the sixth year. Who would have thought that back then?**I would like to thank everyone who has helped in any way.** Keep it up!

The magazine will continue to be free and free of charge distributed as a pdf document. If you still want to reward the effort, you can send me the equivalent of a cup of coffee via PayPal. My PayPal account is my email address, which is below.

And what is currently in it?

Depending on the season, this issue begins with an Advent ornament from Märklin. Simple, without movement and appropriate to the quiet time.

Two hundred years ago, puppets playing music were called automata. In Meccano the model is simply called “Elton John plays the piano”, of course with arm and leg movements.

There are many cranes, also and above all made of metal construction kits. A crane with a special or strange mechanism to keep the grapple at the same level when the boom changes, there are few. Here a Märklin crane based on a design by Wellman from England.

The next report is a hybrid between a craft report and a historical essay. He describes how a heavily used Märklin box became a piece of jewelry.

As already mentioned, cranes are a popular object for metal construction kit fans. That's why we bring Another shipyard crane from Merkur, which impresses above all with its height and its filigree appearance.

In this issue we are introducing the Alpha metal construction kit from the exotic drawer, which has been on the market for a relatively long time, but is still not widespread.

In the last magazine we showed a very nice chassis of a Mercedes-Benz SSK sports car. This is where the sheet metal shell comes in. It's a description of the body and how it came about.

Finally, the first part of a report about the 20th mechanics' meeting in Bebra in October 2021 appears. It presents the models that were shown. The collectibles will be shown in the next issue.

And now here are my usual final remarks with thanks and requests:

I would like to thank everyone who contributed a report or suggestions. Special thanks to Gert Udtke, who reliably discovered spelling mistakes and other linguistic inadequacies.

Our magazine can only continue to exist if we receive many reports on various modular systems, models, tips for handicrafts, historical facts.
So please write and photograph something and help us.

Your

Georg Eiermann

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ViSdP: Georg Eiermann

Christmas model "Advent"

By Wolfgang Schumacher

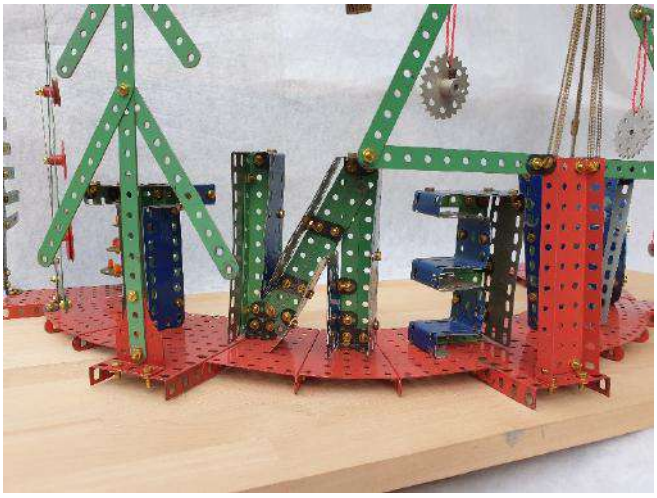
In keeping with the upcoming Advent season, I am showing one of my "Christmas models" that I have devised in recent years.
This "Advent" model is the Märklinization of a 3D lettering of the word Advent that can be found in many places as a decoration at this time of the year.
I thought it was funny to recreate these from Märklin components in stock. That was more fun for me than buying something like that in a grouch shop (= specialist shop for odds and ends).
The design templates for the individual letters were quickly found on well-known search engines. "Man" always needs some template to get the creative process rolling ...
I built the individual letters in alternating heights and in a semicircle

Twelve sector plates and five mounting plates screwed to enhance the visual effect and to have space and / or mounting options for additional ornaments in the form of decorated Christmas trees.

For the outer, only visible side cladding of the surfaces, 3-hole-wide, blue cladding panels in variable lengths were used, which were bent to fit.

As always with my models, which are often quickly "built", I did not use my best components, but the recorded and therefore already a few shredded to echo the good ones for something better. But that is also the point of this topic, to en the parts in ever new models. That this is a bit okay over time and in my opinion no great damage. Around the word Advent I arranged different shapes of "trees", which were decorated with Christmas balls in the form of different gears on a red running cord and / or built blank. The "chain tree" on the left was built from round plates, angle brackets, two coupled long shafts, chains and a top made of three cogwheels. Small springs were used to keep the chain garlands under tension.

The little golden tree on the right, with stylized candle lighting, is made up of gear wheels of different sizes mounted on a shaft and is crowned by a point from a coupling sleeve.



Merry Christmas and a Happy New Year!

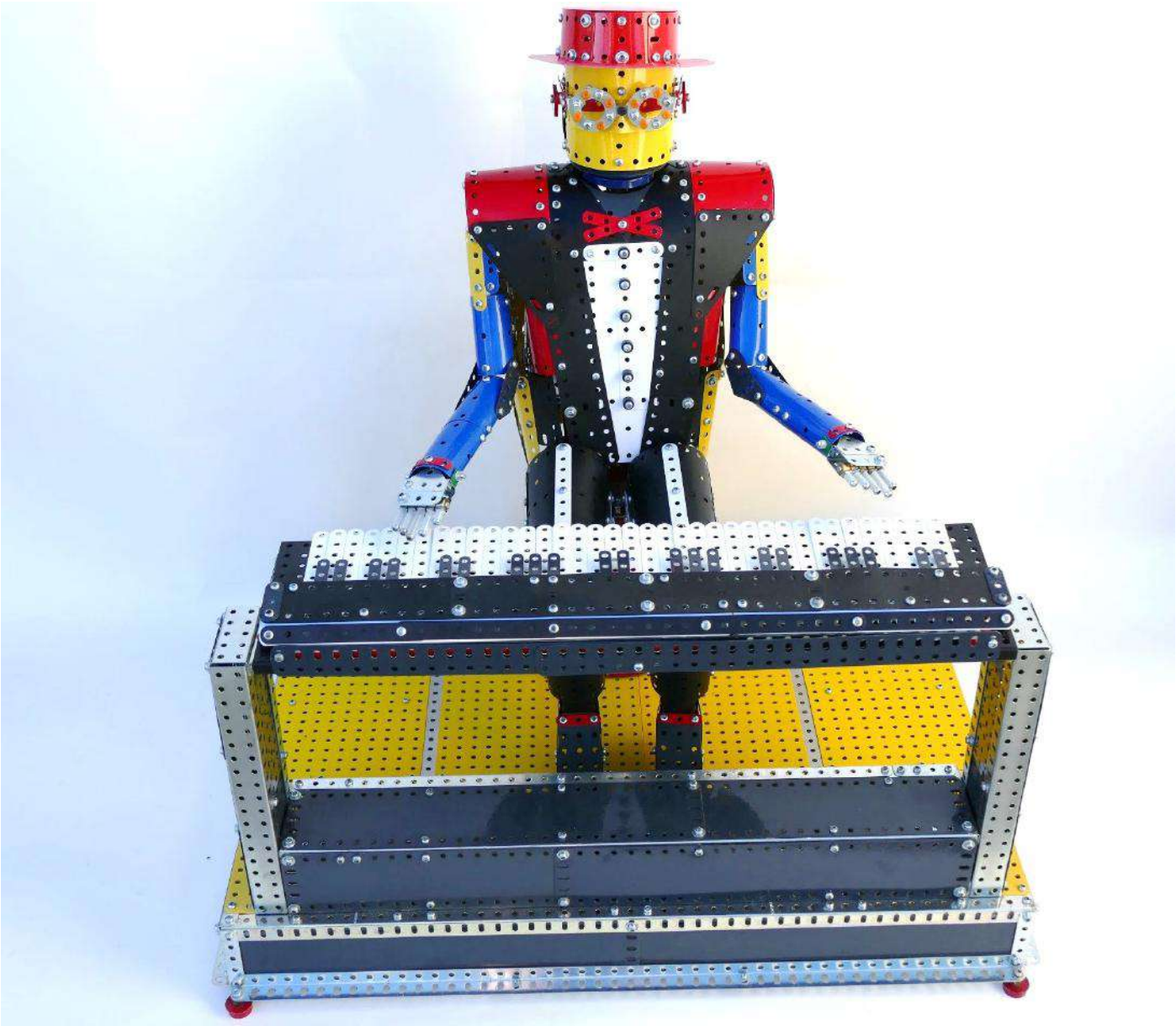


Fig. 1 Elton John at the piano from the front

Elton John at the piano

By Guy Kind (text and photos)

I always wanted to build a Meccano model that was different from my usual models such as a locomotive, crane or earthmoving machine, so I came up with the idea of building a pianist.

I thought a piano player whose fingers could move up and down would be a challenge, but after a few tries with the tiniest meccano pieces as fingers, i.e. waves, I classified the idea as impracticable on the scale I chose. After careful consideration that would be what I thought possible, a piano player with movable arms, feet and head modeled on wizards previously built with meccano in numerous shapes and sizes.

First I googled "human body measurements" and found that it was a science called anthropometry. You always learn when you build Meccano models! Building a human body was an absolute novelty for me, so I started doing it in early September 2019 to make sure I could switch to a more conventional model in time for the show in Skegness should my piano player fail.

If I had known about the coronavirus at the time, I would not have worried about the timing. Six months later, a pianist was born who played his keyboard. I called him Elton John: a singer I've always been very fond.

Meccano model

Fig.2 Side view with details of the player's costume and feet.

The model was built on a scale of 1: 2.5 in order to keep the weight and dimensions of the model at a manageable level and still include enough details. The model is shown in Figures 1 and 2 from different angles.

Arm and head mechanics

My approach to building was to get the arm and head mechanisms working first and take care of the rest later, such as Elton's clothes, keyboard, and feet. I opted for two movements for the arms to mimic a real player: sideways to span the full width of the keyboard, and up and down for the hands that leave the keys and fall on them - as well as a head that extends turns easily and feet that press the pedals. Everything should be mechanical, i.e. without and with electronics easy access for maintenance in case of problems at exhibitions.

The pianist's seat was the ideal place to accommodate the motor and basic drives. The seat itself consists of two round brackets, which are connected by punched strips and 2½ "× 1½" triangular flexible panels are reinforced. The assembly is light, but still very stable and is finally covered with rolled plates that are simply pushed onto protruding bolts. The lower part of the seat includes the electric motor, which drives both the arms and the head via two separate shafts. To avoid repeating the pianist's movements and becoming symmetrical, the gear ratio is different for each drive (25-60 on one side, 17-57 on the other) by means of L-shaped holes.

Above the seat, under the pianist's costume, each of the drives is divided into two parts, one for moving the arms sideways and a second for moving the arms up and down and turning the head slightly. The lateral movement of each arm is triggered by a crown wheel that is connected to a crank and allows intermittent rotation to another shaft. It emerges at about shoulder height, is equipped with a clutch and operates a lever order that moves the player's arms sideways. Figures 3 and 4 show this system.

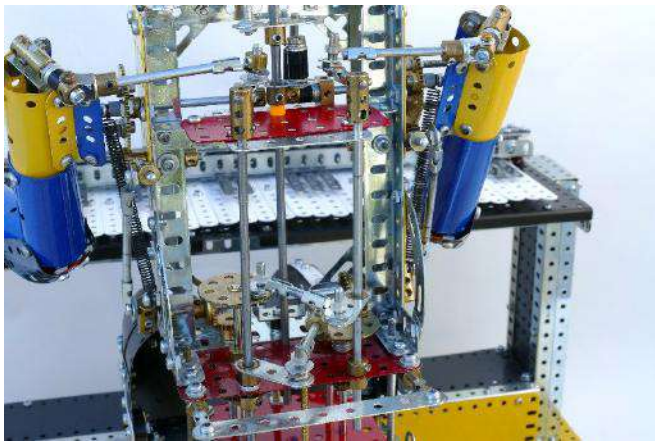
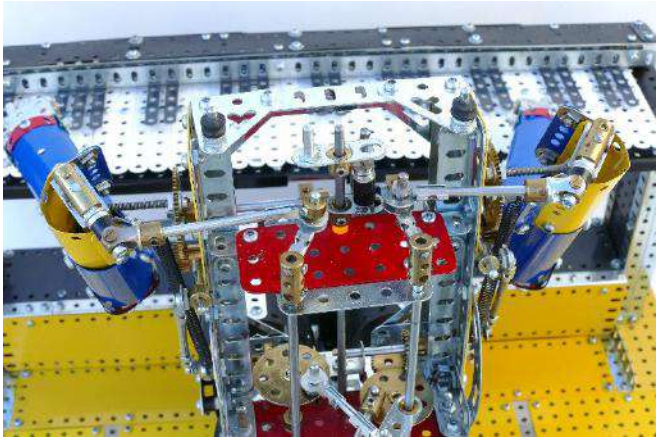


Fig.3 A close-up shows the details of the system that is responsible for the lateral arm movements. Cranks driven from below are operated by the two crown gears visible at the lower end, which are connected to the shaft and strip connectors attached to the arms.



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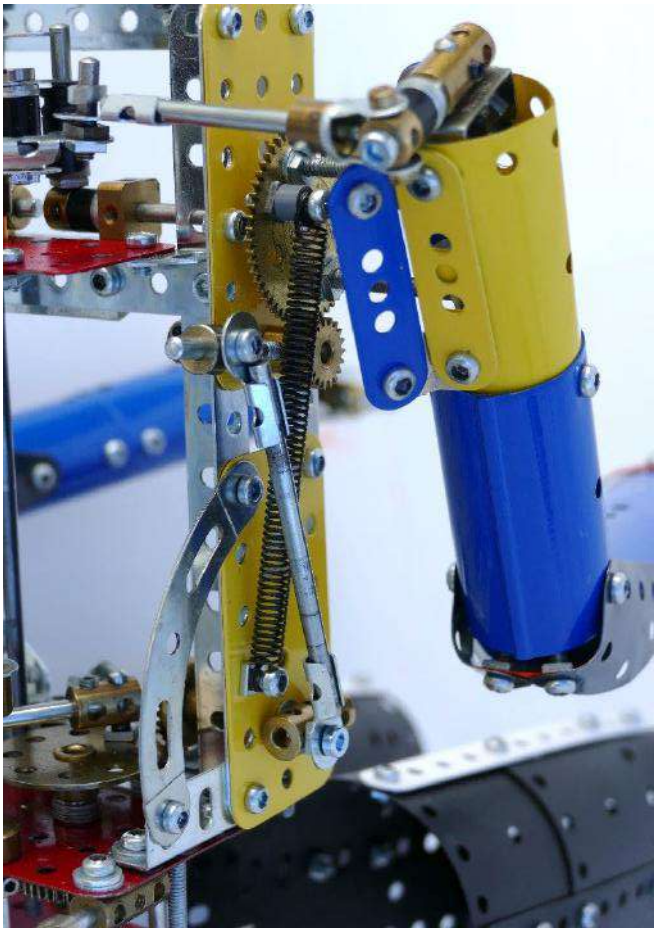

Fig.5 The drive for the up and down movement of the arms. A clutch that acts as a crank and is driven by the crown wheel visible in the background is connected to a 19-tooth pinion that meshes with the 57-tooth gear that holds the arms. The result is a relatively small, vertical movement of the arms that is fairly realistic.

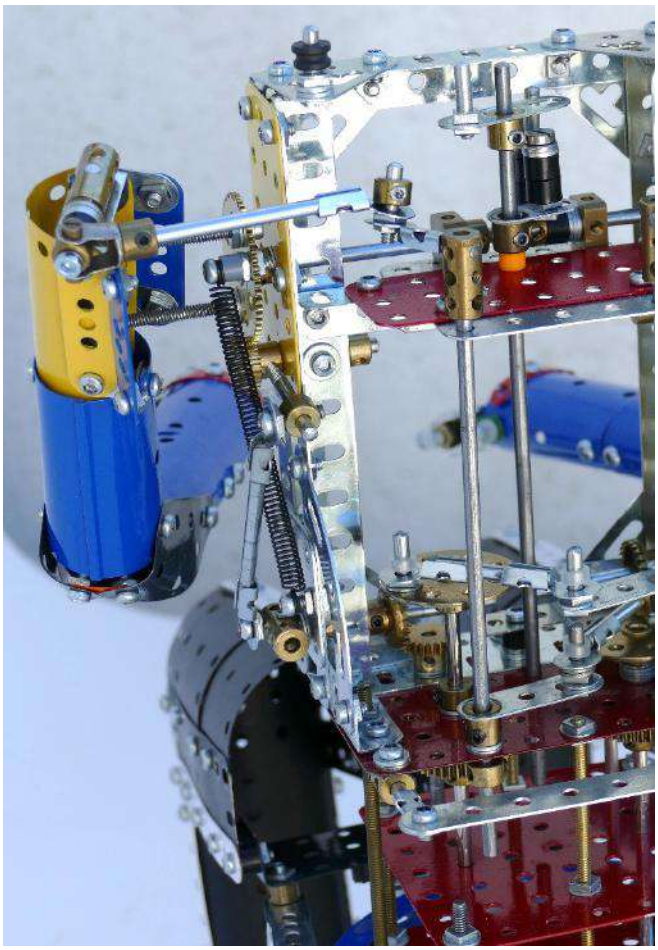

Fig. 5a As in Fig. 5, but different side

The up and down movement of the arms is a little more complicated and starts with a crank as shown in Figure 5. This crank is driven by a 25-tooth crown wheel and 25-tooth pinion via a 38-tooth gear attached to a vertical shaft parallel to the one responsible for arm lateral movement and rotating at the same speed . The crank is connected to a 19-tooth pinion via shaft / band connectors, which is equipped with a long set screw, which implies a small rocking movement on the pinion, which meshes with a 57-tooth gear, which reduces the movement even further will. To this wheel the arms are attached by a system that allows them to rotate horizontally while moving vertically, Figures 5 and 5a

The shaft of one of the 57-tooth wheels is provided at its inner end with an adjusting ring to which a threaded pin is attached, which acts through a 1 "narrow strip on a short crank. The turning of the head uses the small rotational movement of the horizontal shaft, to which the arms are then attached by a series of cranks, which act on a double-arm crank with a threaded pin that engages in another double-arm crank that is firmly attached to it

connected to the head but can rotate freely on a vertical shaft as shown in Figure 5 above.

Each arm consists of a yellow, curved, flexible plate and cylinder for the upper part and two slightly flattened cylinders that start at the elbow. This part of the arm is attached to the upper arm by two black, triangular, flexible plates that allow height adjustment so that the player's hands are as close as possible to the keyboard in their lowest position. The structure of the hands is shown in Fig. 6. Please note the use of sawn-off plastic rod connectors for the fingers.

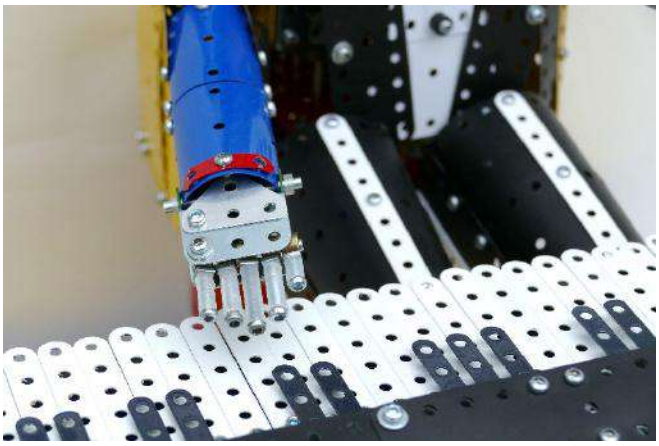

Fig.6 Close-up of the hand. Note the sawed off plastic connectors that act as fingers.

costume

Fig.7 Front view of Elton John's stage costume.

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Fig.8 The back of the costume. On the right side of the neck, the end of the threaded pin that is used for fixation is just visible. Care was taken with the costume to avoid tampering with the mechanism and there was a lot of panel bending involved.

The costume of the player is made of one piece and is made by pulling over the body and fixing it almost completely copied, Fig.9. After that

German Meccano enthusiast Georg Eiermann had shown my head model, he gave me the tip to equip Elton with the extravagant glasses for which he is famous. I have to admit that this was brilliant advice, because now the player is almost instantly recognizable as Elton John (especially if the factsheet on the exhibition table is titled: 'Elton John at the keyboard' !!!), which is not possible without glasses was the case. Just compare Figs. 9 and 10.

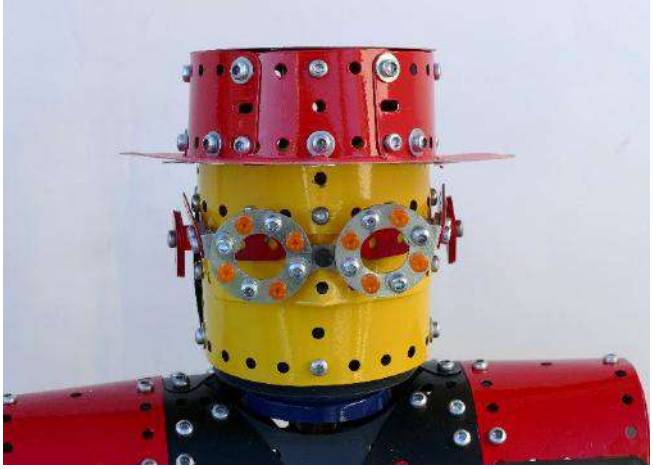


Fig.9 The artist's head wears the chic glasses for which Elton John is famous. The difference to Mike Hooper's original (without glasses) is really remarkable.

Fig.10 This is like Fig.9, but without glasses. Elton's canoeing hat is made of cardboard for the brim and crown, the side is made of flexible panels.

One of the hardest parts was the hat. These usually have very complex shapes that are hardly feasible in Meccano. My choice fell on a canoe animal (better known in England as a "boater"), which was very popular in the 1930s but is still used today (Elton John wore one quite often around 1980). The hat has a simple geometric shape, but its elliptical top defied all modeling attempts. I ended up adopting Frank Hornby's philosophy that meccano boys (girls should not playing with Meccano back then!) “Being able to use cardboard to improve the appearance of your models”. The crown and brim of the hat are made of cardboard, the sides of flexible sheets.

Base and piano

The base is a simple rectangular structure measuring 24½ "× 18½" which is visible in Figures 1 and 2 and requires no further explanation.

Elton's piano has a typical vertical structure and the keyboard itself. I took care to make the keyboard itself look as realistic as possible; it is attached to the base with four screws and can therefore be easily removed. Since the width of the keyboard is limited by the width of the stand, I didn't quite manage to incorporate the correct number of keys, but using regular white stripes for the main keys and black narrow ones for the others has led to this in my opinion that a pretty attractive instrument has emerged. Neither the white nor the black keys can move as they are firmly screwed to their bracket.

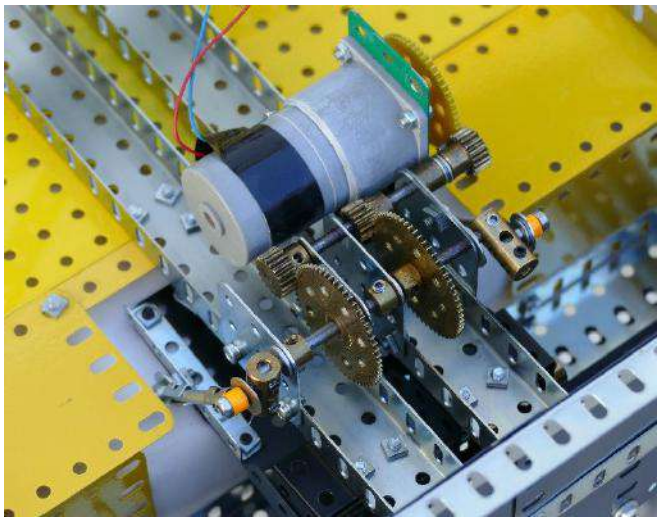


Fig.11 View from below of the drive of the pedals. It is located below the frame. The different transmission ratio from the right to the left pedal serves to prevent the pedals from moving in lockstep.

The base also contains two pedals driven by a Philips motor located in the base that move the pedals via a crank mechanism, Figure 11. Here, too, attention was paid to a different translation of the two pedals so that they do not move in lockstep. In real life the pianist is pedaling; here it is the other way round - the pedals move the feet, which simply rest on them and can rotate freely by moving through waves with the lower part of the legs

connected, Fig.12. The legs themselves are rigidly connected to the body at seat height.

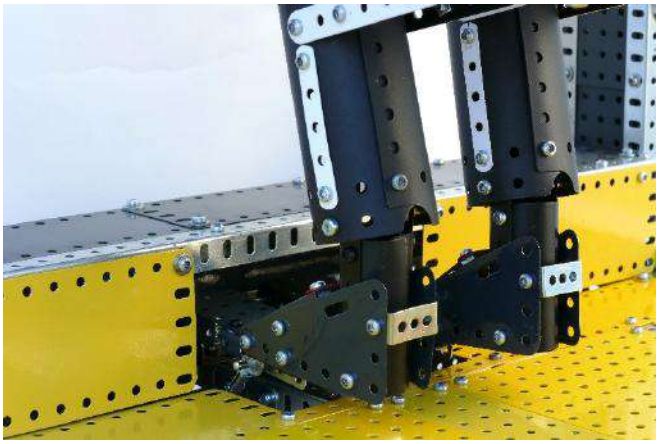


Fig.12 Elton's feet rest on the pedals and are driven by them. They are hinged at the bottom of the legs that are on Hip height are firmly attached to the body.

Elton John's movements are quite realistic, especially because of the differences
Gear ratio
If there is no repeating pattern on the arms and feet, although there is obviously one. To add even more realism, a DVD player plays an Elton John song when the model is started.

This was intended to be my 2020 model, which was shown first at CAM and then at Skegness shows
should be (both canceled later). I have now renamed it my 2022 model and it will be on the two shows above
shown (if they happen!), albeit two years later. Contrary to a 20-year tradition, the first gig was in October at the German screwdriver meeting, which was the only one to have won against Corona so far and was held with a reduced number of participants. Whether I will build a second model for 2022 is still open. If I find an interesting topic, I may try. The piano player was fascinating to build and a pleasant change from my usual mechanical role models. Over time, I've grown to love it and I tend to consider it one of my better models. The election in Skegness will tell if the audience will agree with my opinion!

Fig. 13 Elton John seen at the piano in a three-quarter front view with keyboard, Elton John looks directly into the camera.

Wellman crane with Märklin

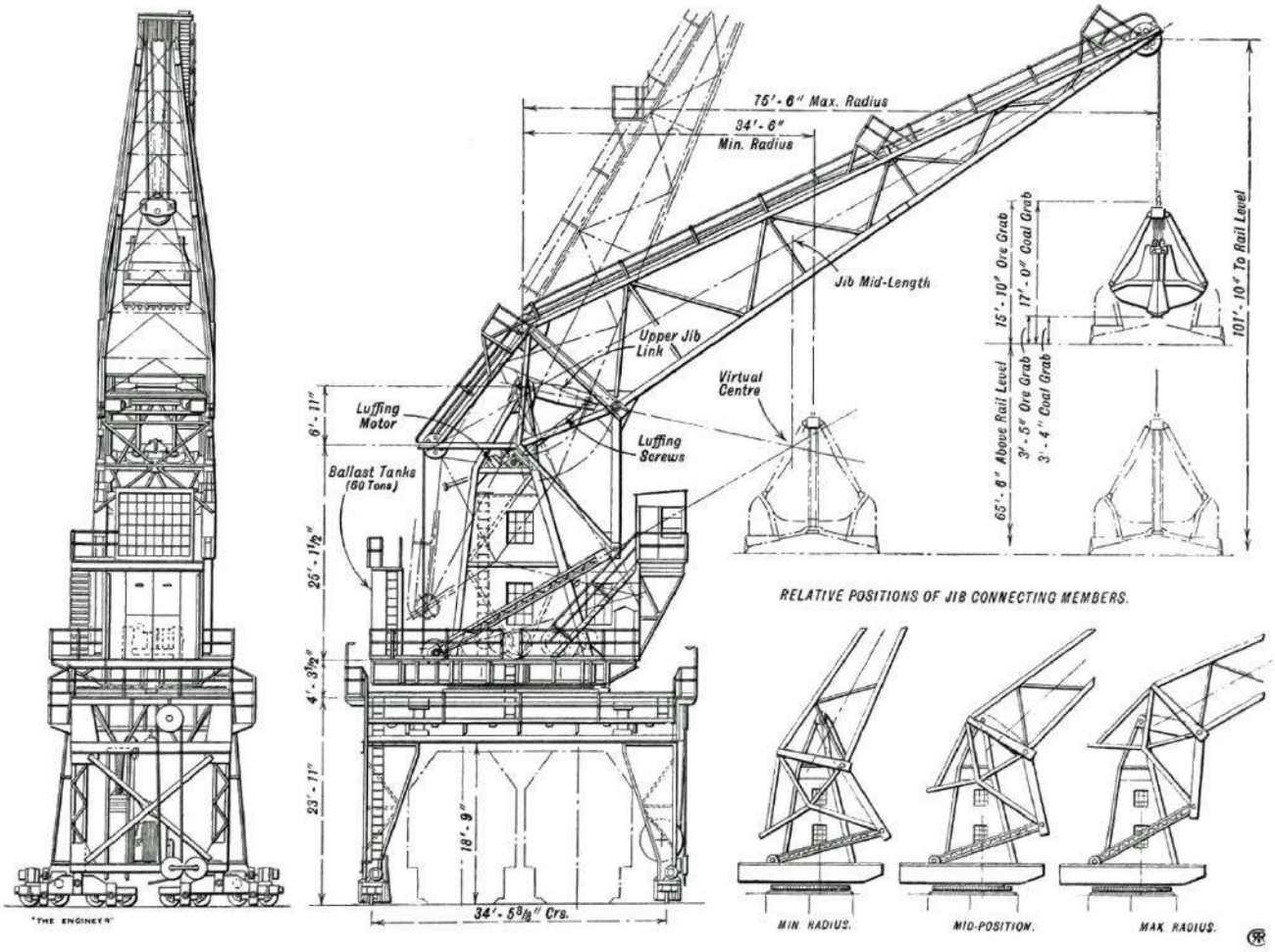
Photos: Günther Lages; Text: Günther Lages, Georg Eiermann

In the German mailing list "Freundeskreis Metallbaukasten", Geert Vanhove showed a picture of a historic Wellman crane from Great Britain. The manufacturing company Wellman Smith Owen Engineering Corporation, Ltd. from London developed a loading crane for coal, iron ore or other bulk goods in the 1940s, which has a new type of boom movement, in which the grab is only moved horizontally when the boom is adjusted. This is achieved through a multi-joint via which the boom is hinged to the upper part of the crane.

The British patents GB 566767 A and GB 611754 A describe the unusual mechanics that prompted me to build such a crane in the first place. The patents mentioned and a good description of the crane in the specialist magazine “The Engineer” of October 5, 1945 enabled me to stay close to the model and, above all, to adhere to the length ratios of the multi-joint.

Thanks to Norbert Klimmek, who provided me with the specialist article and a translation.

The next page shows the views of the crane from the magazine article.

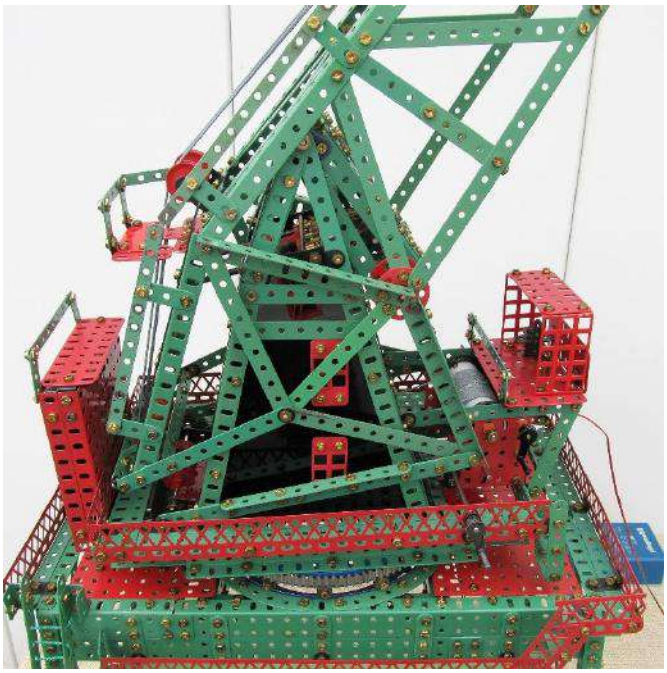


GENERAL ARRANGEMENT OF CRANE

"The Engineer" from October 5, 1945: Level-Luffing Portal Jib Crane. Overall views

The principle of the boom adjustment with the multi-joint can be seen in the drawing above based on the three small basic sketches at the bottom right. The base of the boom is not fixed to the crane's superstructure, but moves on a circular path when it is raised or lowered, so that the load is moved almost horizontally. This multi-joint transmission requires many levers and joints or bearing points of the levers and thus a high construction cost. As can be seen in the views, the operator's cabin of the crane is also surrounded on all sides by levers, cross members, axles or the like. A circumstance that may have made the crane unpopular with the staff. Overall, the mechanism is characterized by high construction costs.

First I built the multi-joint and tried to match the length ratios as well as possible, which is always a certain compromise in a construction with metal construction kit parts, since there are only whole hole spacings, but not 0.7 hole spacing or other fractions there. The compromise found basically defines the size of the crane.



Joint in the "boom up" position

Joint in the position "boom with wide overhang"

The rest of the crane, i.e. the mobile portal with which the crane is moved over rails on the quay, the superstructure, which rests on a large pivot bearing, the boom and the gripper, are more or less common metal construction kit construction.

Märklin 1071 motor with drive for the threaded spindles

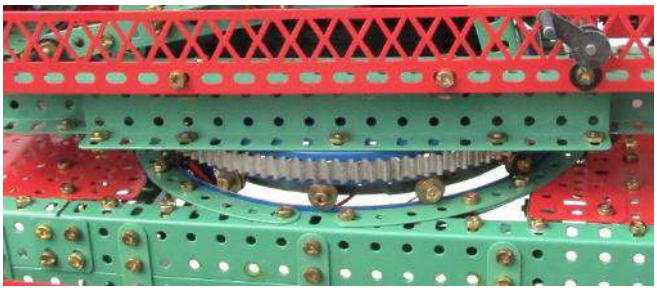
The boom is moved by two M5 threaded spindles. They are rotated by a Märklin 1071 motor converted to direct current and a gear unit connected in between. Because the engine is something is hidden, direct switching by hand is not possible. That is why it was converted to direct current to make it easier to switch using a switch. For the conversion, see Screwdriver & Collector, No. 7, page 24.

The superstructure of the crane is heavy, so that a solid bearing on a pivot bearing with a large diameter is required. The large pivot bearing is made up of two large rings from Märklin (# 11095).

Pivot bearing seen from above inside

Between these two rings runs a ring made of flat ribbons, to which small Märklin line rollers (# 10312) are attached. The bending of the ring from flat strips required a certain precision, but the crane has a smooth operation

Pivot bearing that has a free passage in the middle. The rotary drive is carried out by two opposing gear motors.



Pivot bearing from the outside

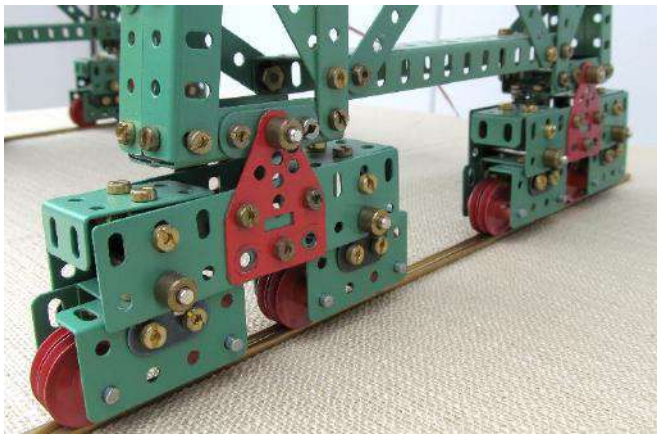
The gripper is driven relatively easily by hand. Two cable drums are coupled via O-rings as a friction clutch. When lifting and lowering, both run in the same direction.

Pulleys for gripper actuation

When opening or closing the four-rope grab, the rope winches are turned in opposite directions via a second crank with a reduction of 1: 3. The crank is held for lifting or lowering and the height adjustment of the gripper is adapted to the closing process. Two hands are required to operate at the same time. The cable drums are plastic tubes with an outside diameter of 28 mm and are centered by cord pulleys with a diameter of 25 mm, which are arranged between perforated disk wheels and toothed wheels with drivers.

The substructure of the crane is a simple portal that runs on four running frames with two pairs of wheels on rails on both sides. Two bogies are combined to form a chassis, one of which is arranged at each corner of the portal.

Portal with ladders, railings



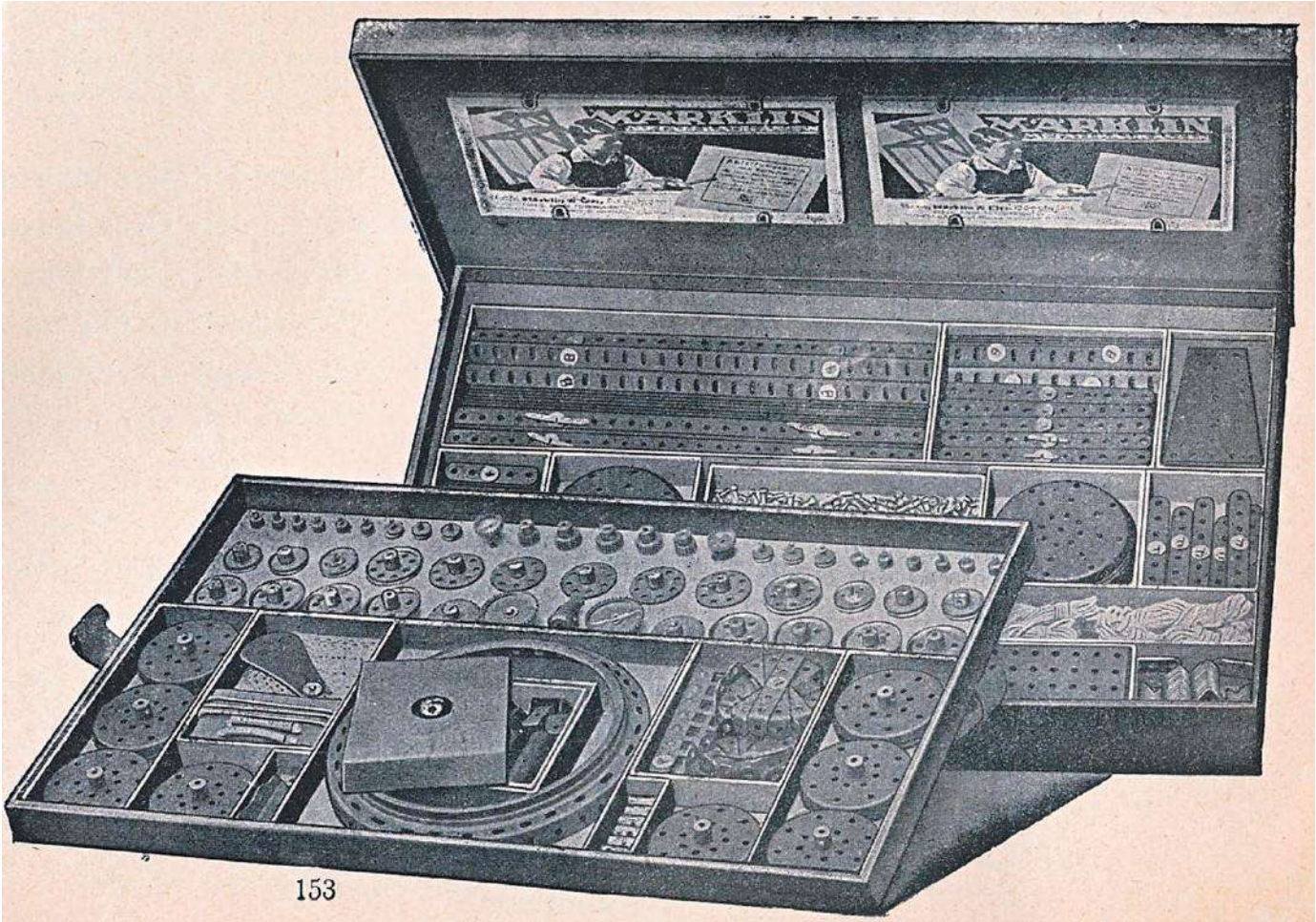
landing gear

The wheels are Märklin cord wheels that are attached in pairs next to each other on an axle and run as rails on two parallel round bars on each side. The crane runs on a total of 32 line rollers. All bogies and chassis are pivoting. A travel drive is currently not available, so that shifting on the rails as well as moving the gripper requires manual intervention, but it also increases the play value. Only the adjustment of the boom and rotation of the superstructure are carried out by an electric drive.

The gripper enables realistic play when unloading large model railway wagons or ships. The complicated mechanism of the boom adjustment is particularly impressive in the moving model.

Ladders, a cabin for the operating personnel and similar decorative elements were added as far as the mechanics and manual operation allow.

A technically interesting model with play value.



Restoring an old Märklin set

By Norbert Klimmek (text and photos)

In April 2005, at the beginning of my second Märklin career, I bought a box of 6 with black parts in a box on Ebay for € 230, which the seller from Hochdorf near Biberach even brought home a few days later because it was back on wanted Lake Constance.

The cardboard box and the insert were held together by 50 mm wide masking tape applied in several layers, a lid and instructions were missing. The inventory showed an almost complete box with very well preserved and hardly bent parts. Well, I thought, at some point a better-preserved six-pack cardboard box will be found and provide the material with a suitable home.

Unfortunately, that was not the case. Until March 2021, the box dated 1922 was left unattended and, apart from a large ring “borrowed” for a model, also untouched in my material warehouse. It wasn't until I was looking for a photo of such a set and found that the Märklin illustrations in the instruction books of the early 1920s showed a set of 6, which could never have existed like this, I decided to restore my case and no longer wait for it to be found.

What are the visible differences between image and reality? With a little experience you will find that

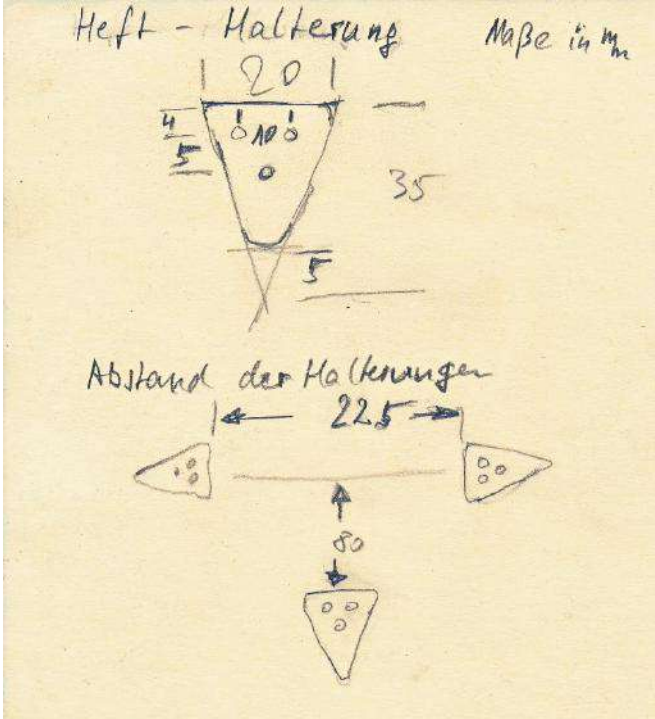
- the boxes shown show snap-on lids, but the real boxes at that time had hinged lids
- that the presentation panel of the brass wheels, which can be seen clearly in the pictures, does not correspond to the applicable parts lists

I have now restored the box and insert - unfortunately without taking any photos. If so, then, I thought, there is also a self-made hinged lid. Such a set had three instruction booklets: 2 x No. 71 for sets 1 - 6 and 1 x No. 72 for the modular motors.

Both booklets No. 71 were housed in the lid, where they were each held by three special clips. Unfortunately, these brackets are only available from old ones

Boxes whose lids are no longer needed, because removing the clips will damage the lid. Since it was illusory to get the six brackets I needed in the foreseeable future, I decided to make them myself.

In my stock of semi-finished products I found a piece of soft tinplate 0.3 mm thick, which had turned dark gray over time. According to the measurements in the following picture, I marked out six equilateral triangles 20 mm wide and 35 mm high on a sheet metal strip 35 mm wide. Since the triangles have their points once at the top and once at the bottom, there is practically no waste.



Dimensions & shape of the holder for the instruction booklet

After cutting, the tips were shortened by 5 mm, the four sharp corners rounded on a belt grinder and the edges slightly chamfered. To make the three mounting holes, I drilled three 3.5 mm Ø holes in a piece of flat steel and beveled slightly with a countersink.

Holders for instruction booklet in the box lid

I placed the sheet metal triangles on the flat steel clamped in the vice, with two tear lines marking the correct positioning. The three holes were then punched into the sheet metal with a hammer and a scriber with a handle. This creates a frayed sleeve approx. 2 mm long on the underside.

The sheet metal clips are now placed on the cover at the positions measured beforehand and hammered into the cardboard. The sheet metal tips protruding from the rear were then riveted by striking a hammer onto an 8 mm shaft rounded at the bottom. Since the lid is made from two layers of cardboard, these areas will no longer be seen or felt later.

Inner lid

After gluing to the top cover layer, the clips can be bent up and down as required by the two booklets. The outer lid part is produced in the same way as the inner part, but enlarged by two or four times the thickness of the cardboard:

- Base lengthways 2 x + 2 x edge
- Base across 1 x + 1 x edge

One more thing: the color of the inner lid is unfortunately a bit too light compared to the lamination of the box. But I will be able to live with that.

First I glued the open edges of the box with bookbinder glue. I filled the hollow outer edges created by bending the scratched thick cardboard with hot glue. Then I carefully detached the inner boxes from the bottom of the box, repaired the chipped upper edges of the boxes by pasting over original paper from other old boxes and glued the boxes back into place, using a bookbinder to fix both their undersides and the sides to neighboring boxes - Glue provided. Until the glue sets

spring clamps held the parts together. The connected interior divisions created a very dimensionally stable box.

Then the outside of the box and the outer side of the lid were laminated with textured black paper. After drying, the lid was connected to the box at the hinge edge with a strip of black bookbinding linen, the glued areas being pressed together with suitable supplements and separating layers made of household foil until the glue had set. Since I did not have an original, spotless cover image, I used the print of a repaired scan.

The insert was restored in the same way as the box. The textile straps attached on both sides to lift out the insert were glued to the outside of the floor before the inner boxes were glued in, and each was additionally secured with a hollow rivet.

To protect the thin lamination, all surfaces, inside and outside, were painted with transparent wallpaper protection. Then it occurred to me that I should have painted the inside of the lid, which was too light, with wallpaper protection tinted with black water-based paint to darken the red. The attempt to subsequently apply this tint to the protective layer failed miserably because the second coat could not be applied evenly despite the addition of a detergent. The result was dark stripes on a light background:

Box with a lid

So I had no choice but to stick the entire inner surface of the lid again with original paper. Fortunately, I still had a few empty boxes from that time that I could "skin" in a large photo developer tray. I needed three strips to completely cover the area.

This is what the closed box looks like from above. It has the dimensions in mm 560 x 355 x 100 (W x D x H) and weighs 16.35 kg gross, with three instructions. The sticker number was printed himself based on a template from Joachim Kleindienst's website www.baukastensammler.de.

Gluing on was not entirely trivial because of the wafer-thin paper and the upright spring clips. First, I slit the slightly undersized paper in the places where the clips should pass through. Then things have to be done quickly: glue the paper, thread the clips and very, very carefully spread out and smooth the “wallpaper”. After drying, wallpaper protection was applied again.

Now the box was ready to be put away. I picked up all the parts that had become dull and dusty over the years and wiped them with a cloth soaked in Ballistol. Many parts were then bundled with clamps, in most cases cardboard washers on both sides as protection against scratches.

The brass parts were also lightened again by briefly treating them with walnut granules in a case cleaner.

Although the storage of many parts in the box is determined by the given divisions, there is still a great deal of freedom, especially for the large number of small parts. My way of equipping is therefore to be regarded as a non-binding suggestion.

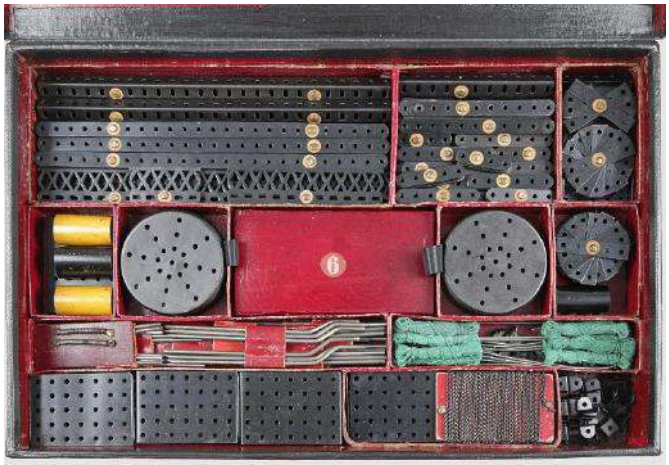
This is what the opened box looks like, with the engine manual no.72 placed on top of the two manuals no.71. I don't know where it really was; I suppose either lying in the box or stuck together with a large manual.

In contrast to an original box, two different instructions no. 71 can be seen here: the instructions on the left have the printer's mark 21^3, the instructions on the right 401122; both editions match this box in terms of time. The engine manual also has the note 21^3 on the inside cover page, but 9322 on page 2, so that March 1922 is to be assumed as the date of publication.

Here again the insert with the small parts box open.

All of the 98 clips contained in the parts list were used to bundle parts together. Of the 180 washers included, 122 were used, so that there are only 2 x 30 pieces in the small parts box. It is assumed that the cardboard washers are included in the parts list.

So that the spoked wheels don't wander around in the oversized compartments, I put them on two spikes, held in place by a piece of cardboard, like those used on the brass wheels.

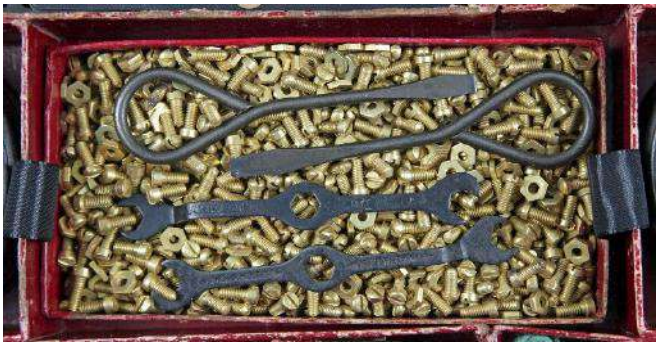


View into the box with the insert removed. I'm not sure whether the screw box had a lid in the center of the picture, because the compartment is very narrow even with a tight lid. I made this lid myself. I put a band of fabric underneath so that the box weighing over 1 kg can be lifted out of the narrow compartment.

Detail picture with bundle of cord

Cords are a special chapter because they are almost always missing. These here were made from natural-colored cotton pearl thread. After cutting into 4 m pieces, the ends of the yarn were sealed so that it would not fray. Then the loosely wound bundles of cord were soaked in a little thinned green silk paint, DEKA Silk, No. 763. The bundle of twine, which was too intensely colored after drying, was then placed under the tap

Treated briefly with hand-washing movements with curd soap and then rinsed out. This almost prototypical color was obtained after drying. Next time I will treat the cords with additional strength to make them more dimensionally stable.



Enlarged Screw box. There are 630 early Märklin screws with different head shapes and 630 nuts. Years ago I had it brass-plated, which detracts from its originality, because the brass layer from the early years was only very thin and the screws therefore very dark. (above)

This is what the bottom box looks like without the lid of the screw box. An underlying tape is also useful here.

This picture (right), taken in the style of the Märklin construction kit photos, suffers from the insufficiently compensated for insufficient recording distance due to subsequent measures. A comparison with the picture from the Märklin catalog and instructions will nevertheless reveal the discrepancies mentioned at the beginning. (right)

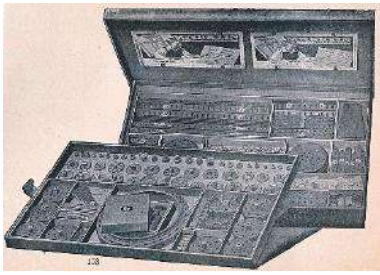


Illustration of the construction kit no. 6 in the instructions no. 71, 401122. The picture is identical to all the pictures of this set since 1919. It was apparently created before the parts list, which was not changed during this period, was finally determined. See also the front photo of the report.

Image 1

Shipyard crane Boel, Temse

By Jacques Longueville

In Temse, on the river Scheldt not far from Antwerp in Belgium, there was the large shipyard "Boel".

Among other things, the large, cooled tanker for methane gas, the "Methania", was built there. (Image 1)

The shipyard had up to 3500 employees from the Temse region until the operation ran into difficulties and went bankrupt in 1992, only to be definitively dissolved in 1994.

The topic of “Boel” has inflicted great social and political wounds in the region.

An icon commemorates this loaded story: a large old shipyard crane has been restored and protected as a monument. (Picture 2)

picture 2

The crane has been marking the Temse skyline ever since. (Picture 3)

picture 3

Unfortunately, the crane was mounted on a solid foundation in the river, the original bogies and rails were not retained.

The foundation is said to be unstable and slowly sags in the river.

It was recently announced that the maintenance of the crane is no longer financially viable and an application has been made to lift the listed building.

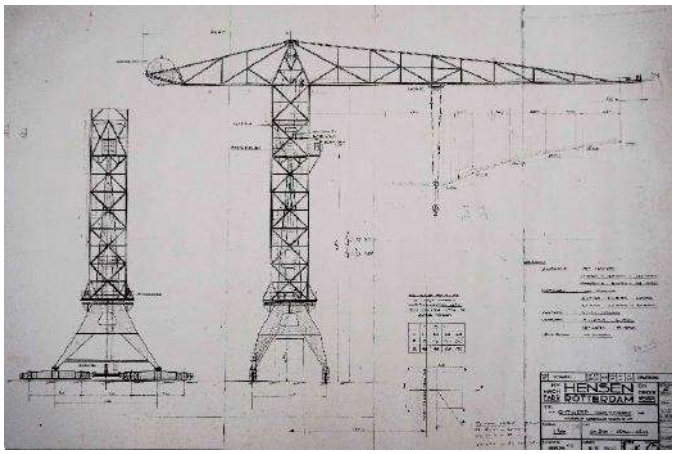
That was the signal for me to consider a replica of the iconic crane.

I then spoke to Geert Vanhove, and he was able to put me in contact with a metal construction kit friend in Temse: Jan Bressinck. Jan has

built and exhibited the crane earlier (Fig. 4).

Picture 4

He also provided me with a construction drawing of the crane (Fig. 5).



Pic 5

I got me Jan's crane arrived look, it's an imposing mo-dell, Indeed without mobile Frame. Jan has I took courage makes the pro to tackle the problem and i started to plan.

my paver crane is on Image 6 in one Position to se-hen, like a viewer before to the example standing him-hen would. A impressive high example for steel compartment werkbau, that visible from afar is.

Pic 6

First I had to decide how big the crane should be.

To do this, I looked at my parts collection and found that my Merkur parts would be ideal for such a construction.

Thanks to the thin Merkur beams and the small M 3.5 screws, the fine half-timbered structure can be reproduced in a beautifully filigree manner.

With the Merkur parts I then tried to reconstruct the typical diagonal struts of the original (Fig. 7).

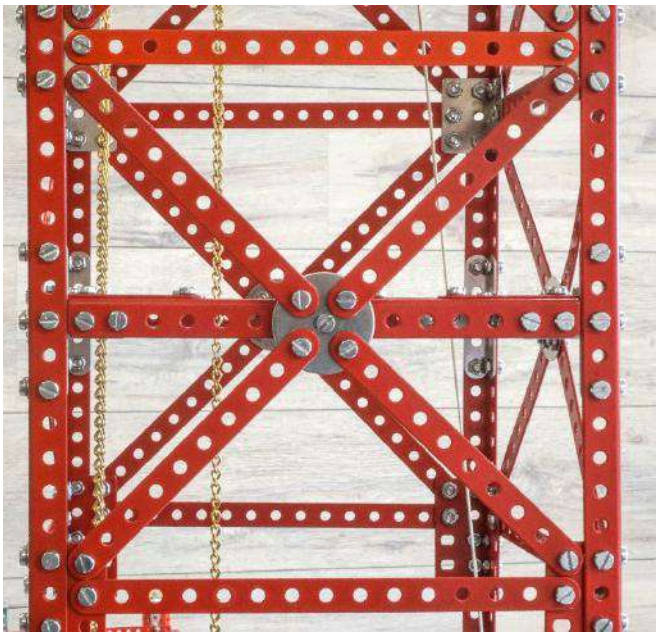


Fig 7

Picture 8

This resulted in a width of 17 cm in the model for a width of 5 m on the original.

This resulted in a scale of 1:30, which I then shrunk down to the usual 1:32 scale, as with the model railway track I.

That is still a great measure. The 48 m long boom is 150 cm long from the pivot point, the crane a total of 190 cm high.

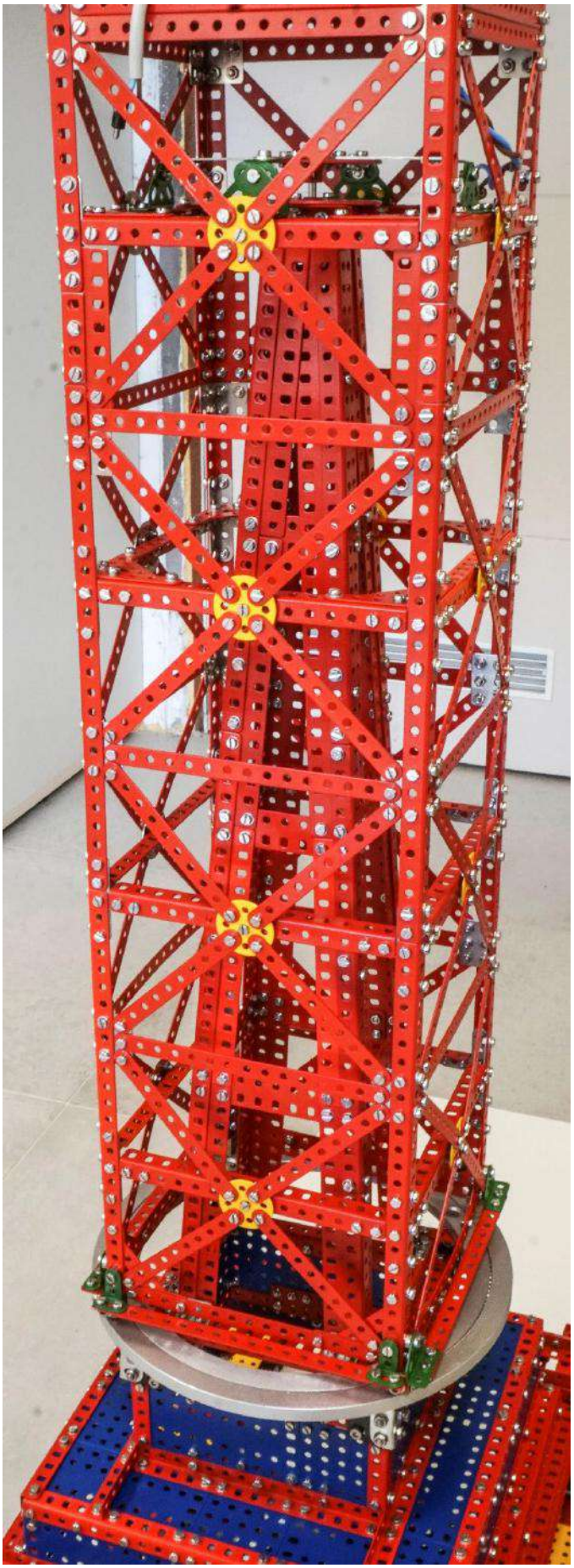
So all in all a giant model that hardly fits into my hobby room. (Picture 8)

Despite the monumental dimensions, the crane does not look bulky, the fine half-timbered structure looks rather airy and transparent.

I liked the design of the pivot bearing on the old crane.

Inside the superstructure is a solid square tower, with a broad base and a top that reaches halfway up the crane. The entire crane frame rotates around this tower, including the fixed boom. (Pic 9)

Picture 9

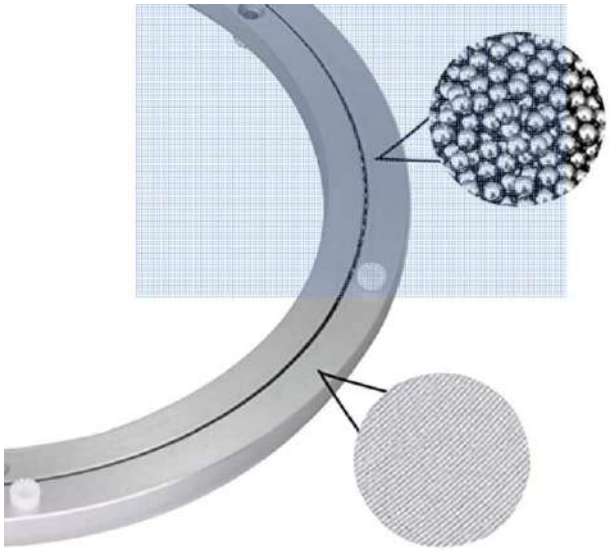


Picture 10

The frame rests on a large ball bearing at the bottom and is held on the side at the top of the inner tower. This construction ensures stable storage without tilting or other lateral forces.

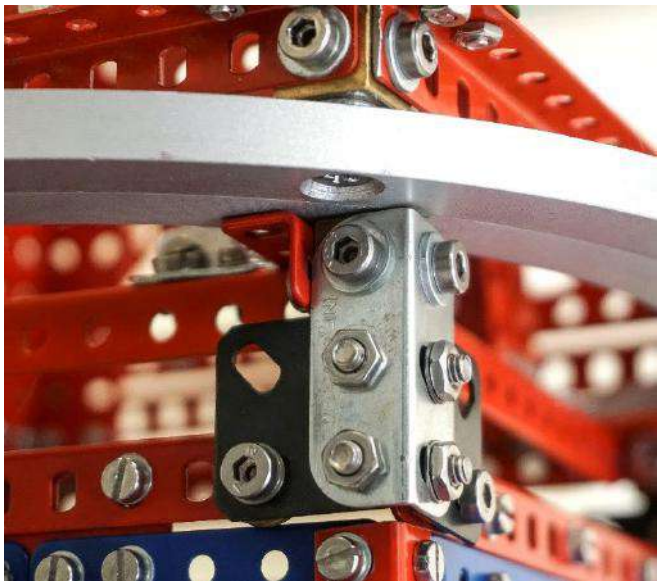
I could not realize the large warehouse with a wide opening for the inner tower (Fig. 10) with my metal construction kit. An inexpensive purchase part ("Lazy Susan") was inevitable.

With an outer diameter of 250 mm, an opening of 200 mm and a thickness of 8 mm, this component is ideally suited for my purposes (Fig. 11). The heavy crane turns with a finger.



Picture 11

The outer ring and the inner ring of the bearing each have four M4 threaded holes where I could tighten my M4 brass cubes. With this I screwed both the inner tower and the outer frame very tightly. (Pic 12)



Picture 12

The large bearing does not have a ring gear for the rotary drive. I didn't dare to add Norbert Klimmek's solution (welding Märklin sprockets together and screwing them onto the outer ring). The method is beyond my craft skills. I did not find a simple solution and therefore decided not to use a rotary drive.

The listed crane stands on a solid base. Back then, Jan Bressinck recreated the base with Meccano parts. (Pic 13)

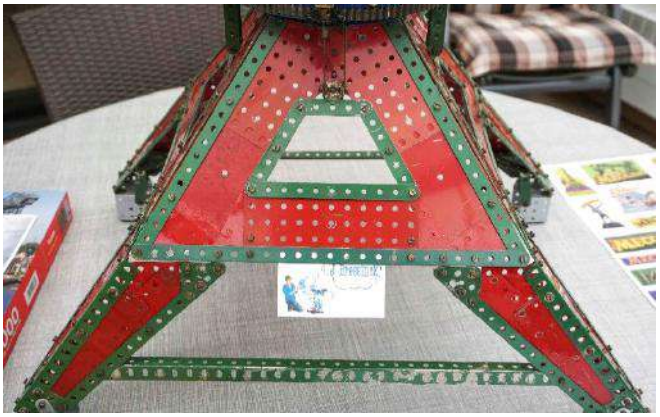
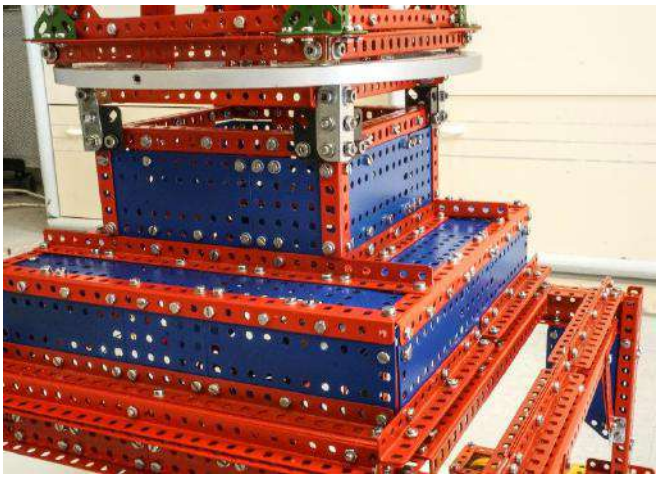


Fig. 13

I tried that too, but couldn't realize a very rigid construction. Then I built the original version of the crane with mobile bogies. Instead of the angled feet, I built the base with sturdy rectangular cuboids. (Picture 14)

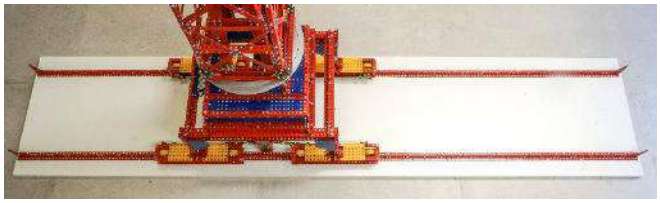


Picture 14

The four bogies can adapt to the rails in all directions, they each have two wheels, consisting of a Märklin wheel and a screwed-on Merkur flange. All eight wheels will be

Picture 15

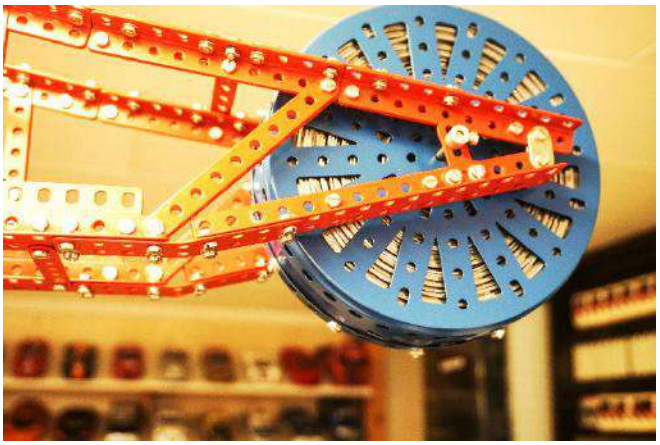
driven by a central gear motor. (Picture 15). The rails have a track width of 28 cm. (Picture 16)



Picture 16

The long boom has two rails for the trolley at the bottom. The boom is stiffened at the top with a framework and two continuous ribs up to the counterweight. This structure is firmly screwed to the crane frame (Fig. 17). In order to keep the whole thing in balance, the counterweight had to be determined precisely and dimensioned appropriately. Six kilograms of lead, packed between two Märklin discs, correspond to the image of the original. (Pic 18)

Picture 17



Picture 18

The trolley moves smoothly in the boom, it is driven by a 5 m long Märklin chain from the machine house (Fig. 19). The chain is kept under tension by a long Meccano tension spring. A separate gear motor with a large chain wheel drives the trolley back and forth quickly.

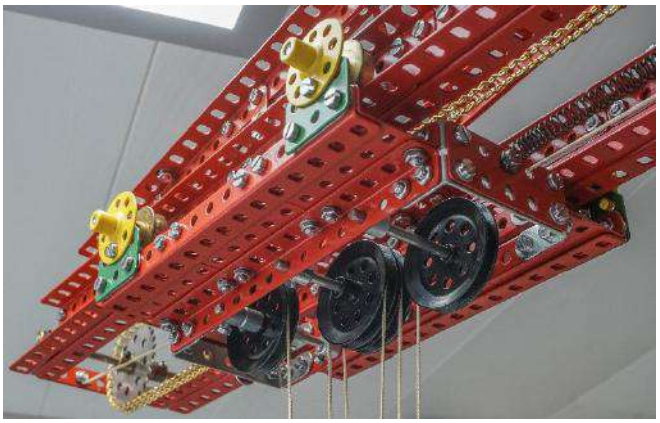


Fig. 19

Image 20

In trolley operation, the last rope of the pulley must be attached to the end of the boom, otherwise the load would move up and down when the trolley is moved. The trolley has four large cord wheels, two of which are used for the pulley system, one for lifting and one for compensating for the movement of the cat. The hook for the main load has a 3-pulley block and tackle, modeled on Günther Lages with continuous partition walls (Fig. 20).

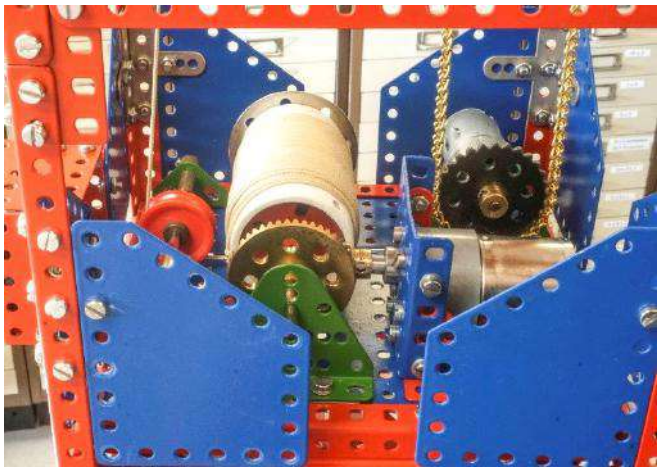


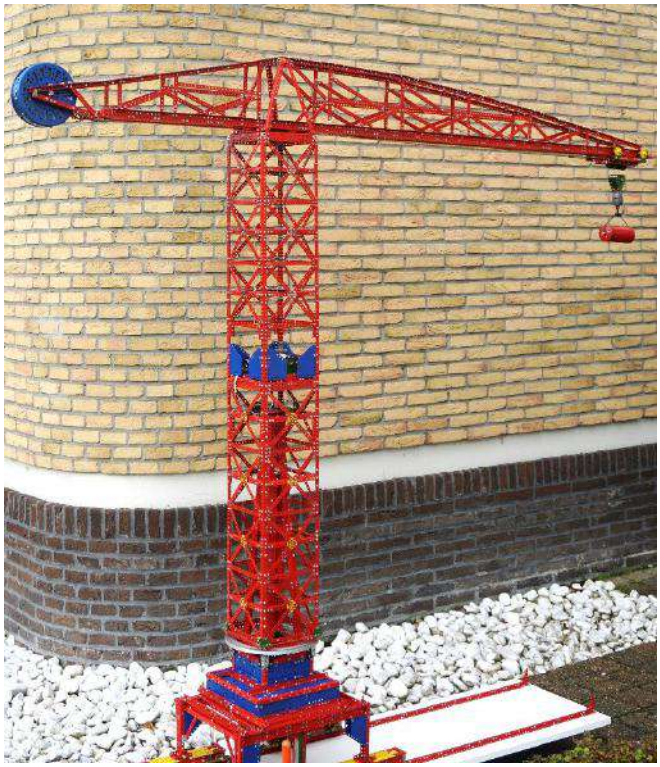
Fig. 21

The hook of the main load also contains a lead ball to tighten the cords, because the cord has to be pulled very quickly, especially when lowering. For this reason I did not use steel cables as they separate from the drum when unwound quickly.

The lifting drum is also driven by a separate gear motor in the machine house at about half the height of the tower, the crane operator can move the main load very quickly and powerfully (Fig. 21).

I had to give up an attempt with the Märklin 1072, it just lacks the strength.

For transport, the tower is divided into two parts at the level of the machine house. (Fig. 22)



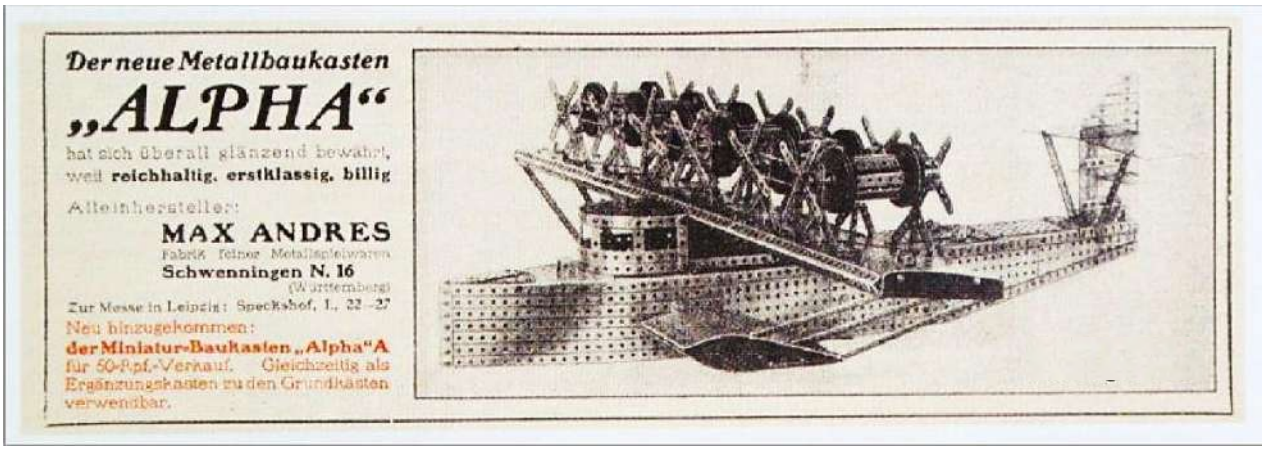
Picture 22

Cover picture of the instructions for the Alpha 1 box

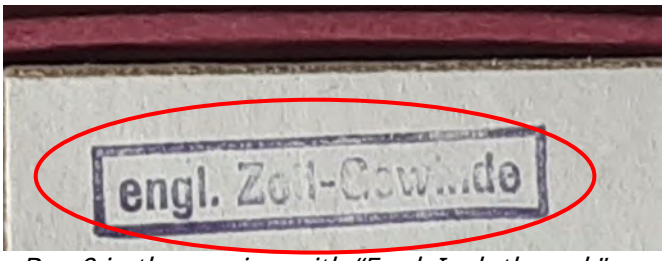
From Urs Flammer's exotic drawer: Alpha

In 1920, the master watchmaker Max Andres founded a factory for fine metal toys and apparatus construction "Alpha" in Schwenningen (today Villingen-Schwenningen) in the Black Forest. This factory had only a few employees and produced music boxes, clocks for chess players, for example, other fine mechanical devices and the Alpha metal construction kit. But all in modest numbers. The company went out in 1970, the founder died at the age of 86 in 1975.

The range of construction sets extended to a small basic set 0, a supplementary set 0E and a larger basic set 1. Basic sets 2 and 3 and supplementary sets 1E and 2E are also mentioned in parts and price lists Internet known. The basic set 1 contained 215 individual parts, the basic set 3 contained 700, a quite considerable range of components.



Advertising show off the year 1933 in the "German ting Toy ren lines tion "



Box 0 in the version with "Engl. Inch thread "

Box 1 in the version with metric thread

Before and during the Second World War, there was also a K cannon kit as a contemporary toy for an increasingly militaristic society.

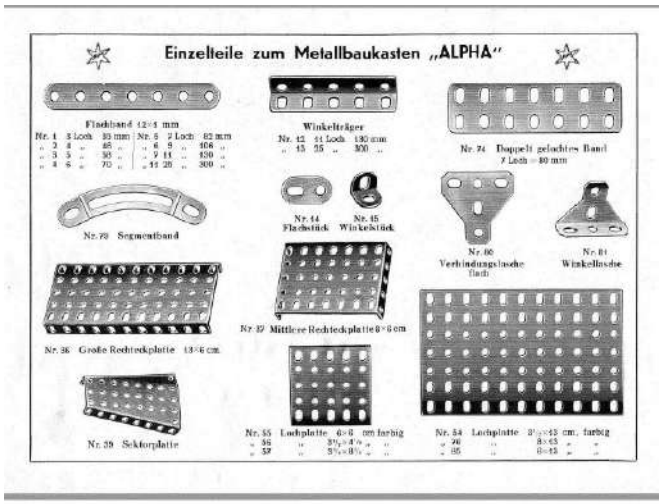
The hole spacing of the perforated strips was 12 mm, the hole or axis diameter was 4 mm. The screws had an inch thread (5/32 ") and were made of brass or a metric M4 thread in steel. The sheet metal parts were made of nickel-plated steel.

Box 1 with high quality brass parts

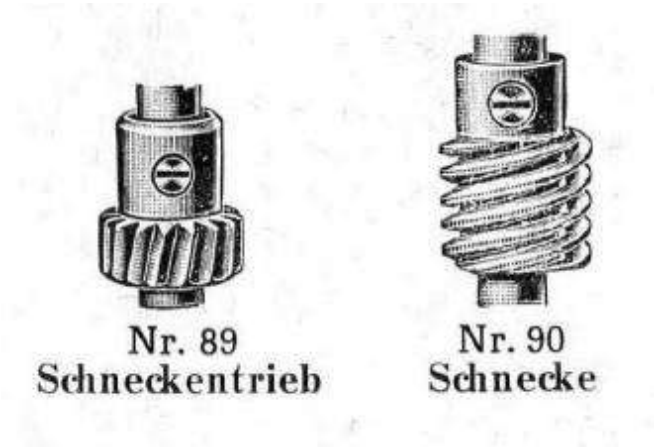
Alpha 3 from an offer on the www. Please the below Note the different gears.

The range of parts was based on the market leaders, but was not that extensive. The gears came in two different sized modules. A special pinion with helical teeth for meshing with a worm wheel is interesting. With this geometrically correct execution you can see the origin of the precision mechanics and apparatus engineering.

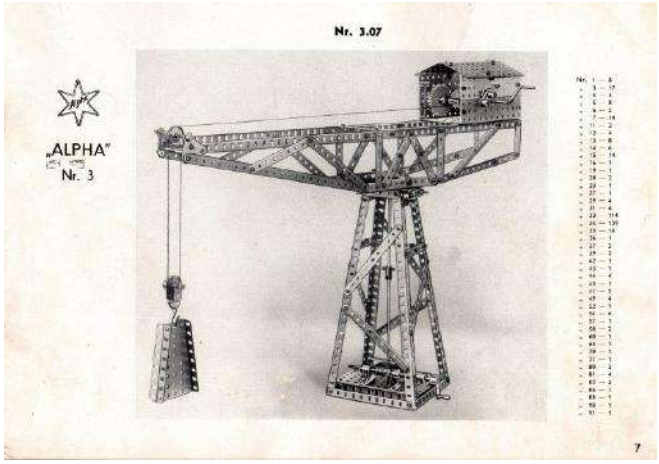
There was a large wheel that, according to the instructions, was made of “pressed material”, possibly Bakelite.



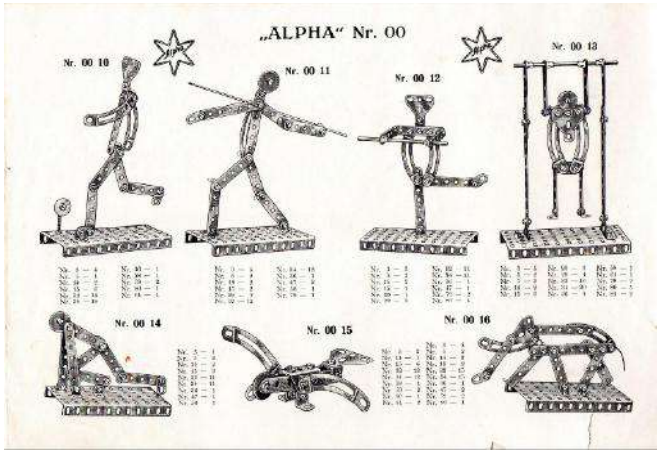
Parts list



Snail and special pinion for it

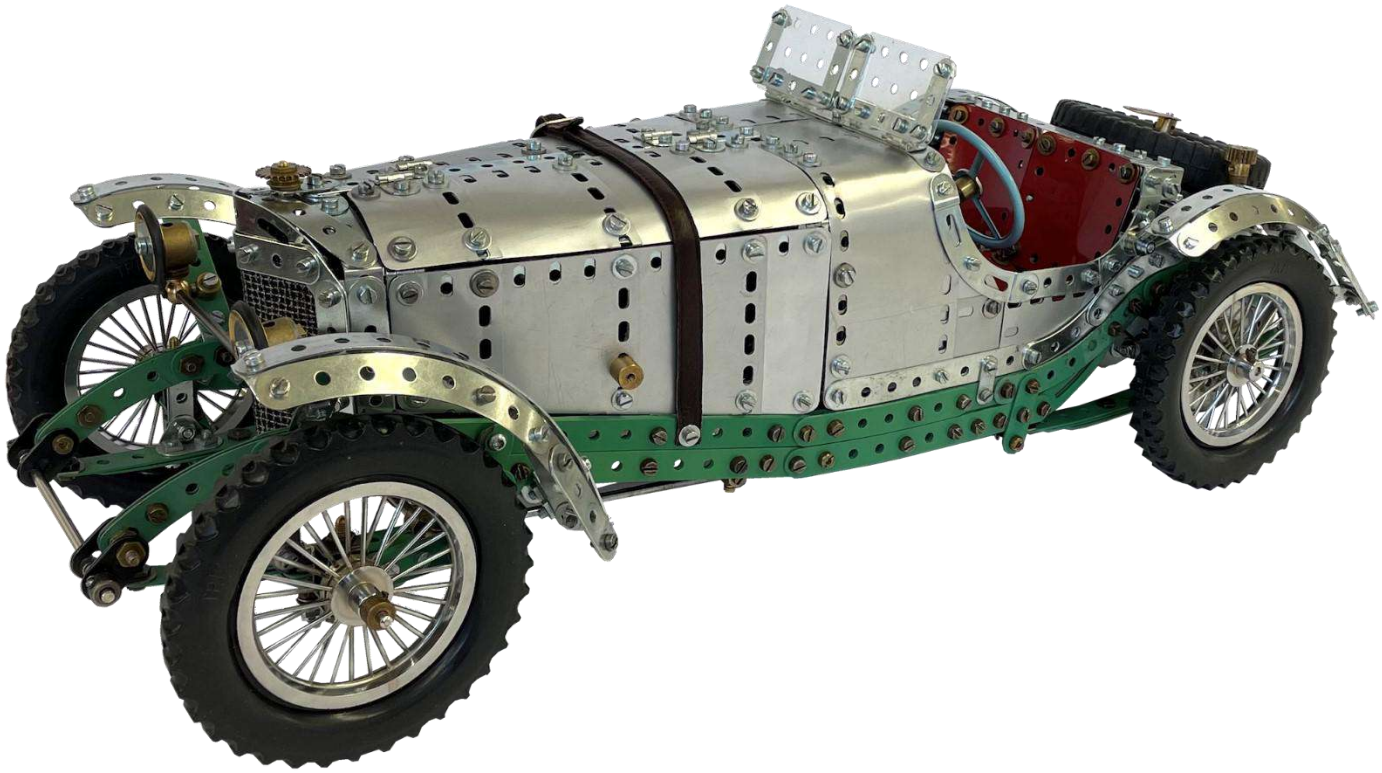


Construction template from the instructions for Alpha 3



Construction template from the instructions for Alpha 0

Cover image for the K cannon kit



Construction report Mercedes-Benz SSK:

A body or "the journey is the goal"

By Fabian Kaufmann

Based on my SSK chassis, which I had built in autumn / winter 2020, six months later I still wanted to assemble the entire car including the body. My first consideration was what color to make the body in. The original was white, but this color was out of the question for me, as neither Meccano nor Märklin have white sheets and a solution with sheet metal from the hardware store was also ruled out for me. I remembered that Märklin used to have blue metal sheets that were silver-colored on the back. Since my SSK is a hybrid of Meccano and Märklin parts anyway, the matter was decided: it should be silver-colored. Also because silver is at least one color that was used by the successors of this model, the silver arrows, was common and therefore fits in well with the timing. I quickly got the necessary cladding panels and could start with the first test constructions. Before I go into detail, I would like to mention that I actually built at least three cars or bodies on this project, because every attempt

To achieve a visually appealing result in a construction phase, at least two further revisions followed. With the bonnet, I even started from scratch twice. Hence the subtitle: "The journey is the goal". Building the body itself was an interesting and educational experience in terms of proportions and building according to a model.

The body basically consists of four assemblies:

1. The hoods - there are two halves - between the radiator and the bulkhead
2. The front part of the driver's cab from the bulkhead to the lowest point of entry
3. The rear area of the driver's cab from the entrance to the rear or the spare tires
4. The four fenders

The bonnet:

The cladding of the bonnet proved to be relatively complicated from the start, because it is tapered

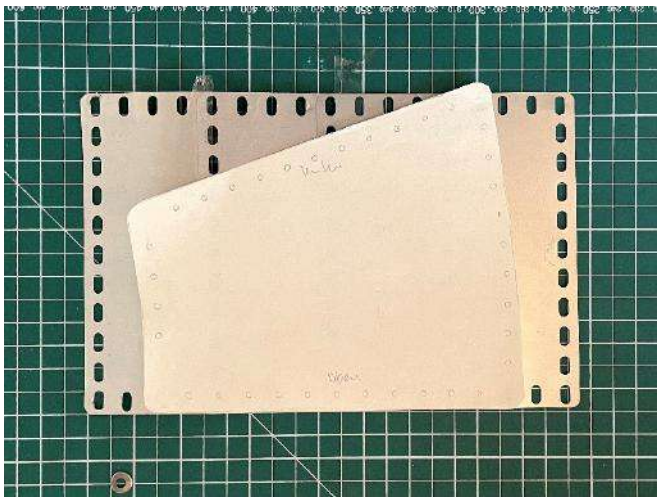
towards the front of the radiator both in the side profile and from above. The jacket of this shape thus resembles approximately a (half) truncated pyramid with a rectangular cross-section. My plan at first was not to cut up the old Märklin plates. In the first attempt, this was also achieved by cleverly layering the panels within a frame made of two 13 mm perforated strips in the longitudinal direction as well as two 7 and 11 perforated strips bent into the shape for the front closure on the radiator and the rear end of the hood on the bulkhead.

Image 1

Figure 1 shows a first test setup to test the proportions and function of the hinges. In this first version, the frame made of perforated strips was screwed onto the panels to hide the fact that some of the panels did not reach all the way to the edge of the hood. However, this frame disrupted the overall picture considerably. The bonnet looked a bit clumsy with this design (Fig. 2).

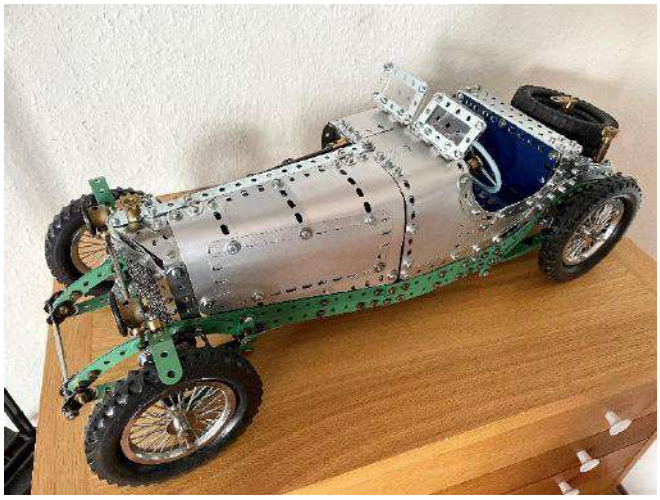
picture 2

In the second attempt I then placed four 11x5 panels next to each other for the left side of the hood and according to the jacket of the hood shape cut in one piece and this time screwed onto the mentioned frame from the outside (picture 3).



picture 3

That looked better, because it made the support frame invisible and the bonnet fitted better into the entire body (Fig. 4).



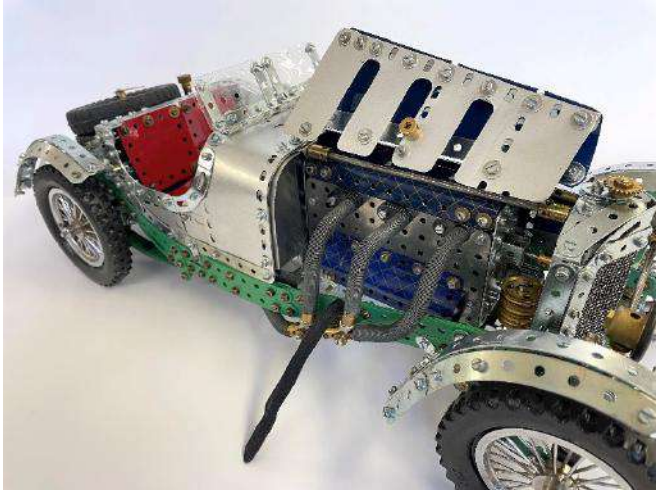
Picture 4

The price for this, of course, was that I had to cut the panels off at the front, back, and bottom. In addition, there was the disadvantage that the three vertical rows of holes drifted off towards the rear due to the conical shape of the hood, which did not look good. I then tried to hide this flaw with an 11x5 plate that I placed on the side of the hood (Fig. 4). But that wasn't such an appealing solution either.

After the left (carburetor side) hood half was finished, I also realized that I had forgotten the three exhaust manifolds on the right side. They pass through the hood and merge in an elegant way below at the level of the frame to form an exhaust pipe. With this approach, a one-piece hood would of course no longer be openable, because the one in one

large arch opening hood would then get caught at the lower edge of the three sloping exhaust pipes.

It was time for my third and final attempt. Because now it was clear that I had to split the two halves of the bonnet horizontally again, as was the case with the big model. Due to the division just above the exhaust pipes, the side wall of the bonnet underneath can be pushed vertically upwards past the pipes and opened (Fig. 5).

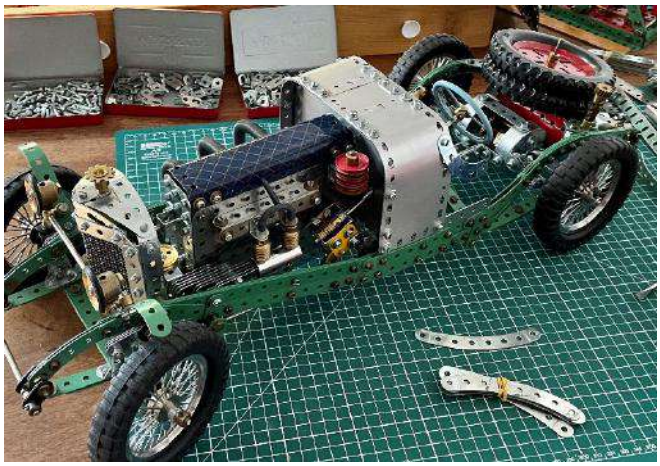


Pic 5

With this third hood, I basically proceeded in the same way as before, namely layering the panels next to each other like scales and cutting off the protruding sheet metal at the edges according to the cardboard patterns I had made beforehand. Of course I also had to punch new holes in order to be able to attach the 13 mm perforated tapes underneath. Fortunately, this works very well with a discarded punch from the tailor's shop. I then had to cut out the side wall of the right bonnet according to the three exhaust pipes and reinforce the remaining narrow sheet metal strips with 5 or 6 perforated strips from the inside so that they could not kink. The entire engine hood rests at its rear edges on a very narrow sheet metal edge, which is mounted as a step under the bulkhead. A leather strap with a buckle securely closes the bonnet, just like the real SSK. The four hood segments are only reinforced from the inside by the lengthways 13 mm perforated strips. The Meccano hinges are also attached to these perforated strips. During this third attempt, it turned out that the reinforcements on the radiator and on the bulkhead running across the hood were not necessary and only applied unnecessarily. That's why I just left them out in the end. that the reinforcements running across the hood on the radiator and on the bulkhead were not necessary and only applied unnecessarily. That's why I just left them out in the end. that the reinforcements running across the hood on the radiator and on the bulkhead were not necessary and only applied unnecessarily. That's why I just left them out in the end.

The driver's cab:

The front area of the driver's cab consists of an 11x5 plate each, which covers the sides between the bulkhead and the dashboard. Since the frame that surrounds the bulkhead is 24 holes long, there was a gap of only two holes (1 ”) in the middle that still had to be filled (Fig. 6).



Pic 6

So that the holes are covered from behind, a 7x5 plate is installed slightly offset under the two 11 mm plates. The attentive reader is likely to wonder at this point. why I didn't make the frame for the bulkhead 25 holes long, because there are perforated strips as well as panels in this length. The answer is simple: the proportions made it necessary. Neither with 23 nor with 25 perforated hinges would the height or width of the bulkhead and thus of the entire center car have fit proportionally to the rest: In order to maintain the specified height, the body would have been 0.5 "or 12.7 mm wider or vice versa; to maintain the width, the car would have been 6.3 mm higher at this point.

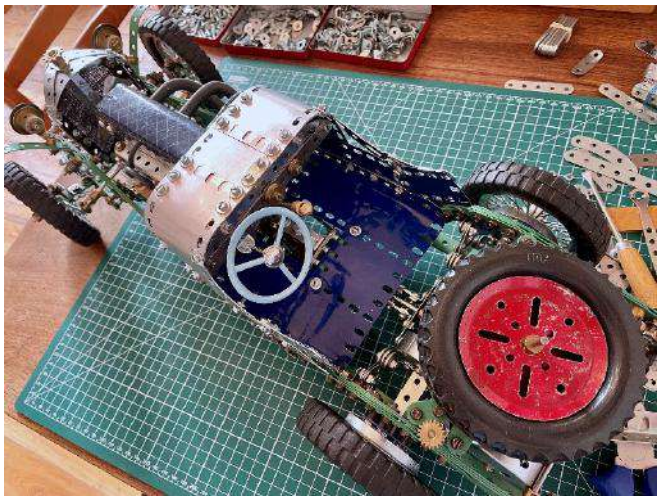
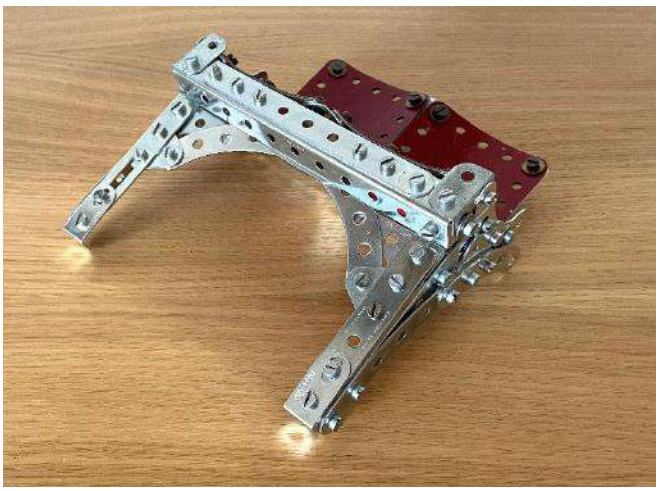


Fig 7

The side connection from the 11x5 panels to the entrance area consists of two horizontally arranged 3x5 panels and curved Meccano perforated strips for the upper edge finish. At around this time I also installed the car floor made of blue 11x5 panels. They are parallel to the transmission to the right and left of it. I angled the outer edges by 90 ° in order to mount them on the side of the body. A 5x5 plate covers the middle section above the cardan shaft (Fig. 7).

The rear area of the body:

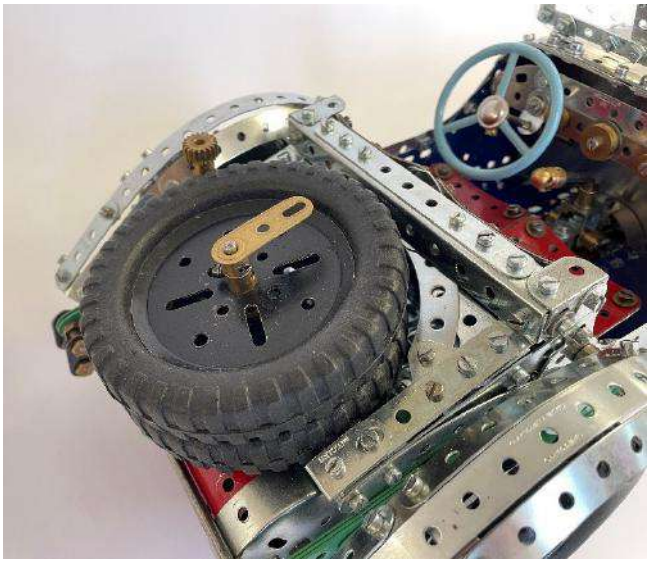
I also built the rear area of the driver's cab a total of three times. In particular, the area between the seats and the spare tires was difficult to see on many of the SSK pictures. There were also apparently different body versions. Since I wanted to build the “White Elephant”, the racing version of the SSK, I had to study a lot of pictures in order to understand this area exactly.



Picture 8

Picture 9

I ultimately built this part of the body as a separate module (picture 8 + 9). It also includes the two seats that I attached to the transverse 11er angle bracket before installation. The fiddly “mounting seats on the vehicle floor” was no longer necessary. As for the accessibility in this area, I had already had bad experiences with earlier models. Since the two spare wheels are firmly attached to the chassis and are therefore not part of the body, I still had to design a nice arc around the tires. The body ends on half of the spare wheels and in front of the tank, which is actually visible on the SSK (Fig. 10).



Picture 10

No cladding panels are installed in the entire rear area of the body. Even the small 3x5 plate was still too big to be used anywhere. That's why I filled the few gaps on the side and behind the seats with various Meccano flat strips and angles.

The four fenders:

With a vintage car model that I built a few years ago, I had the idea of using curved 7-hole punched strips from Märklin to create the round shapes of the fenders, which were based on the shape of the tires themselves. Because if you bend these curved perforated strips again in a lateral direction and arrange two of them opposite, you basically get a dome-like shape that is well suited as a mudguard.

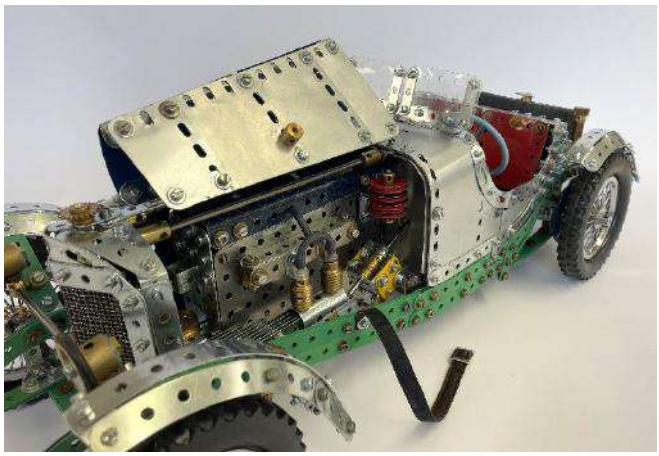
For this model I used curved 8-hole straps from Meccano in combination with "obtuse angle brackets". In this way you get about a 45 ° angle between the bent 8 mm perforated strips on the side and the middle 11 mm perforated strip, which has been bent into a large quarter circle (Fig. 11).

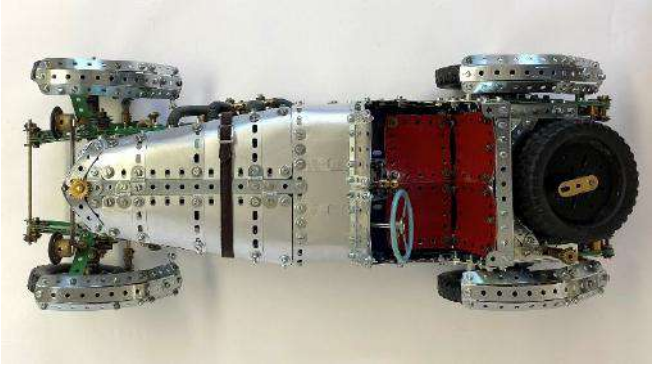
Picture 11

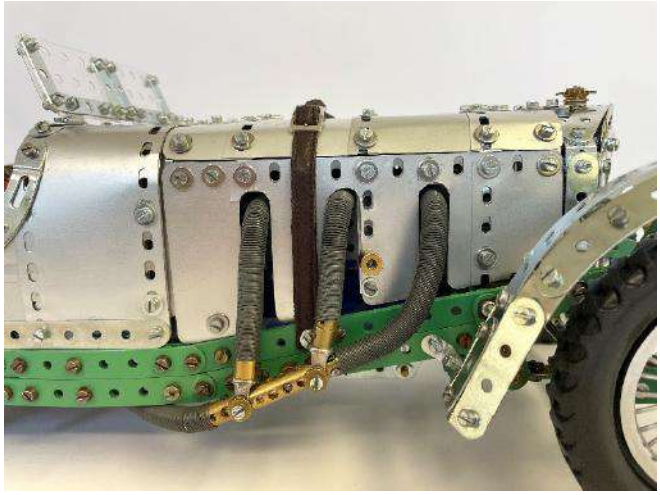
The fenders on my model come out in a short straight piece towards the rear end. At the front over a length of four holes, at the back over 5 holes.

Picture 12

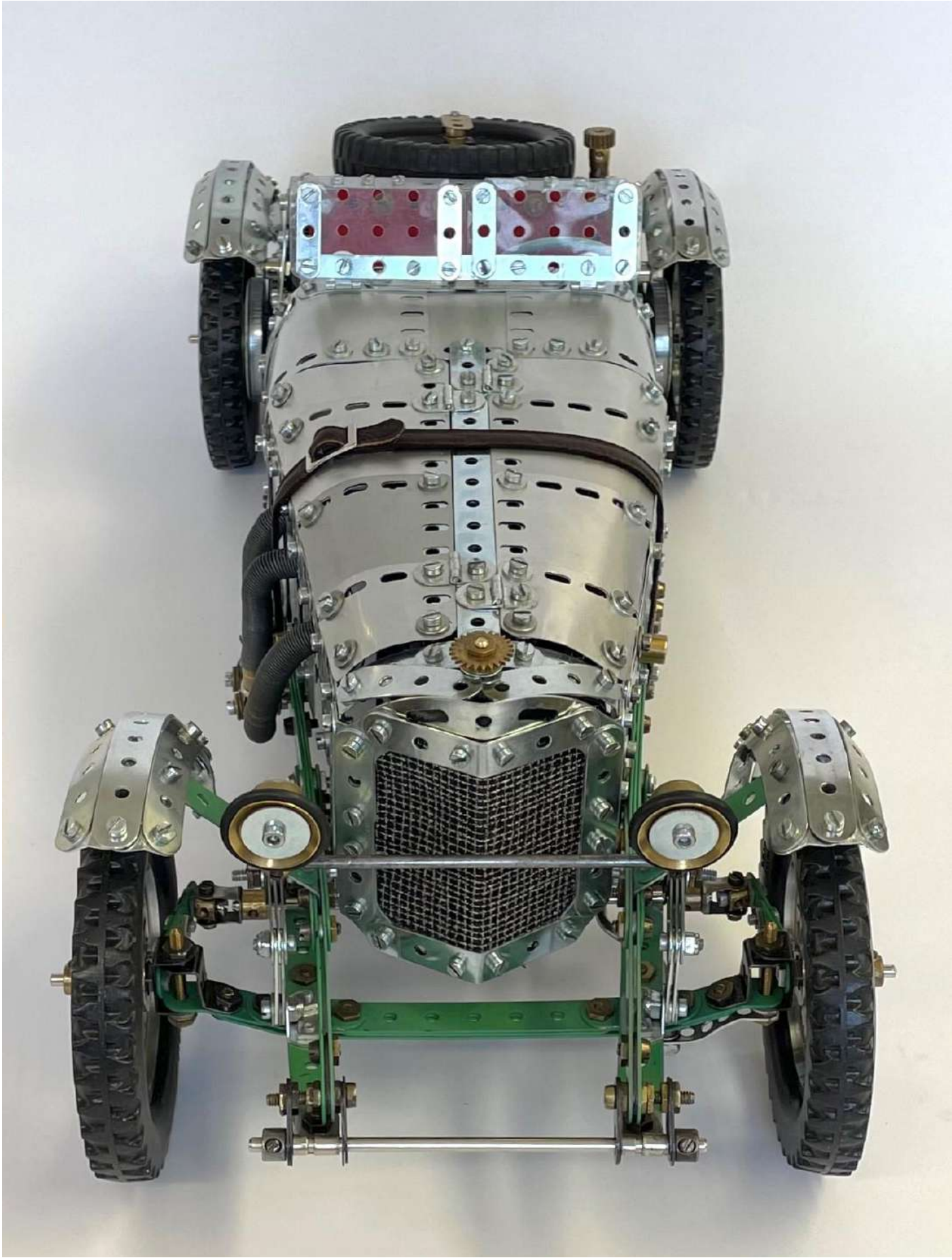
The pictures 12 and following show the finished car from different perspectives.







The finished car is 58 cm long, 23 cm wide and 20 cm high. The tires come from Trix. The weight is approx. 6.5 kg.

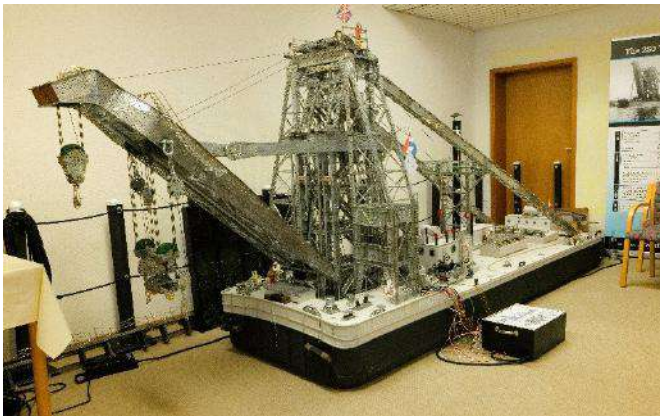


20th mechanic meeting in Bebra 14.-17. October 2021

From Georg Eiermann

Starting with a small, first meeting in Klingenthal in 2002 and after a small meeting due to corona last year, the 20th meeting of the Freundeskreis Metallbaukasten was a big show this year. We were again impressed by the number of exhibitors and visitors who came from B, CH, D, DK, F, L and NL. Some of the friends can be seen in the “family photo” above.

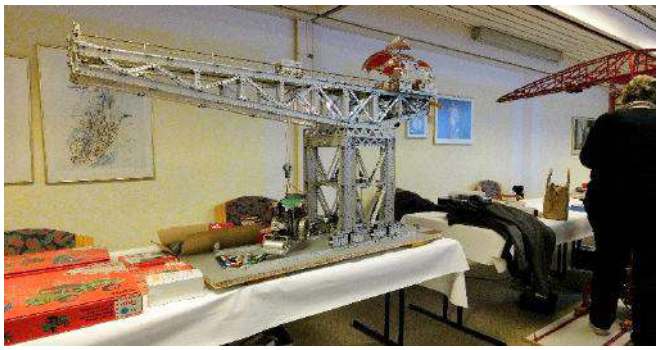
In order not to fill the space with repetitions, I would like to point out in advance that in this report I have included the models "Elton John at the piano" by **Guy child**, "Wellman Crane" by **Günther Lages**, "Werftkran Boel" by **Jacques Longueville** and the "SSK sports car" from **Fabian Kaufmann** do not show them again with pictures, as they were presented in detail earlier in the booklet. But in Bebra they were shown with justified pride.



The unmistakably largest model was the giant floating crane from Trix, the **Geert Vanhove** and **Jeannette Boot** set up and demonstrated. This model has already been described here in previous editions.

The three yellow blocksetter cranes from the Hachette collection were just as striking **Georg Eiermann**, **Michael Röhrig** and **Thomas Wollny**. The three cranes differed in details, but I'm only showing Michael's one here:

But there was still from **Urs Flammer** a blocksetter crane from Stokys:



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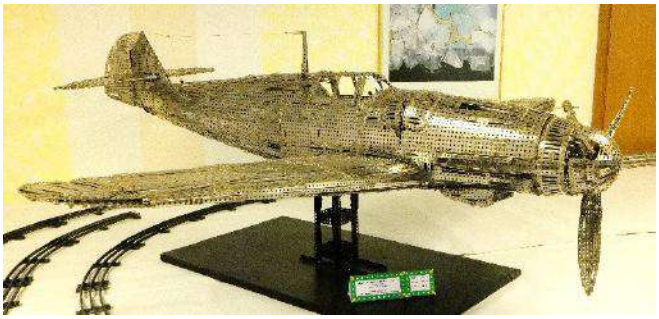
The left tower was from **Rike Ahlbrand** built from Eitech, the right one from **Michael Röhrig** from Märklin and others, each based on real models.

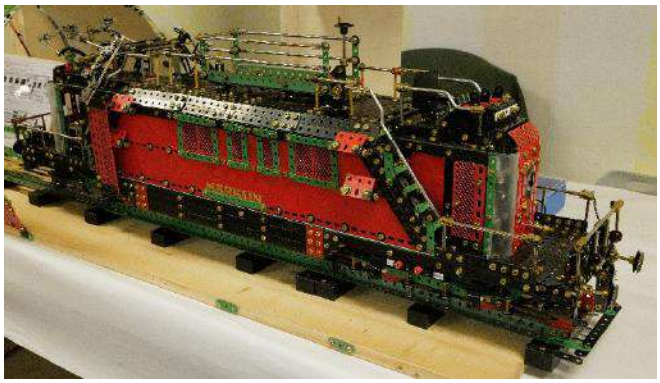
Andy Drabek Not only did he make videos, he also brought his Eitech aircraft and railroad vehicles from **Hans-Peter Kuhlo** with, who unfortunately couldn't be there.



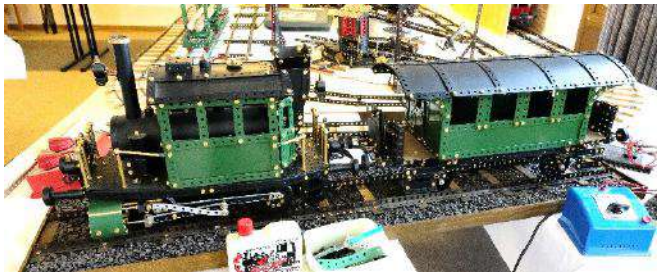
Günther Lages surprises us every year with one or more new cranes. That year he brought a model of a floating crane, similar to the well-known Märklin model, the Wellman crane, a steam-powered derrick crane (here with compressed air) and a small railway crane. All types

With a high play value, it means a holder to make a difference.

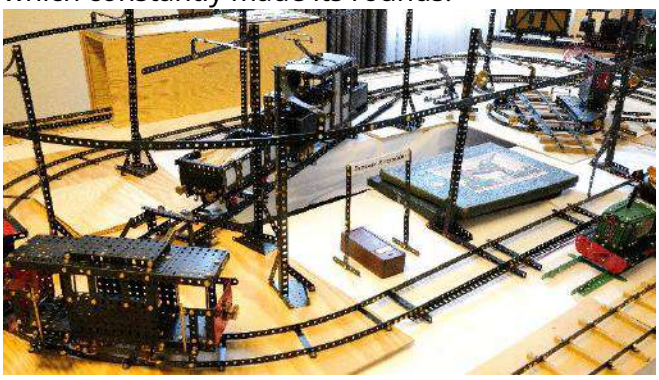
Gert Udtke showed a railway snow blower and the tunnel examination vehicle (Schitzel & Collector, No. 17/2020), both with many functions.



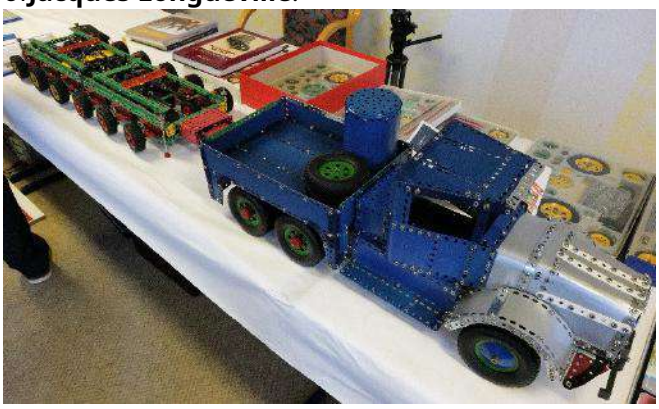
Stefan Lang brought a local train from the Palatinate with steam locomotive and passenger car. Very nice models that were created with Märklin and Meccano.



When it comes to railways, of course **Wolfgang Kommol** not missing with his train based on a suggestion in a Märklin manual from the 1920s, which constantly made its rounds.



A Culemeyer road scooter with a Kaelble tractor also somehow belongs to the railroad. Here is the model of**Jacques Longueville**.



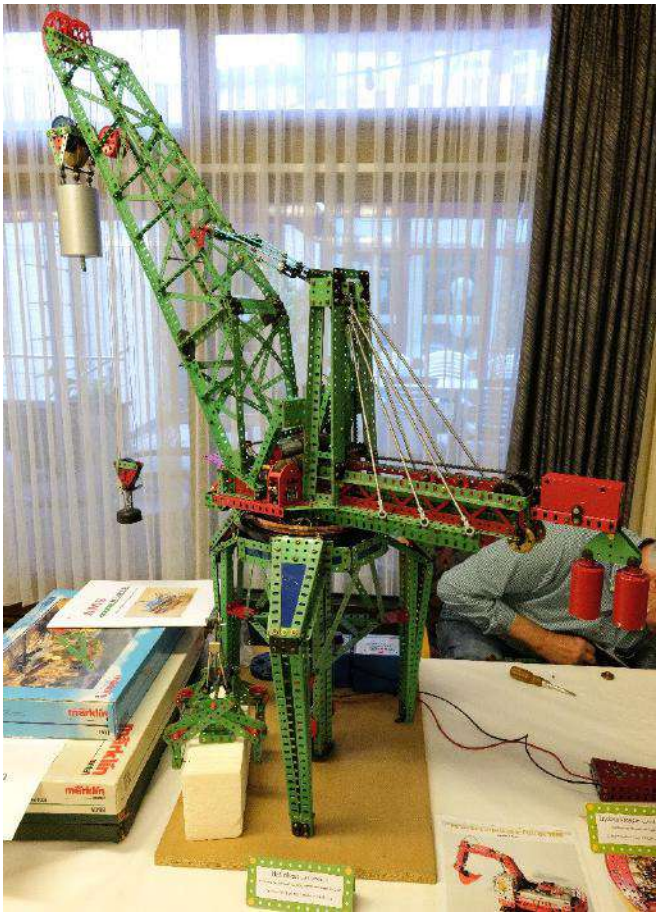
This has made the transition to road vehicles. First a large model of a Mercedes-Benz SSK sports car from**Wilfried v. Tresckow**.

Stefan Lang also built a Bugatti with Trix and a Morgan three-wheeler with Meccano, each supplemented with in-house components.

A Gottwald mobile crane is only partially a road vehicle. This one was made from Eitech by**Ullrich Peters** built.

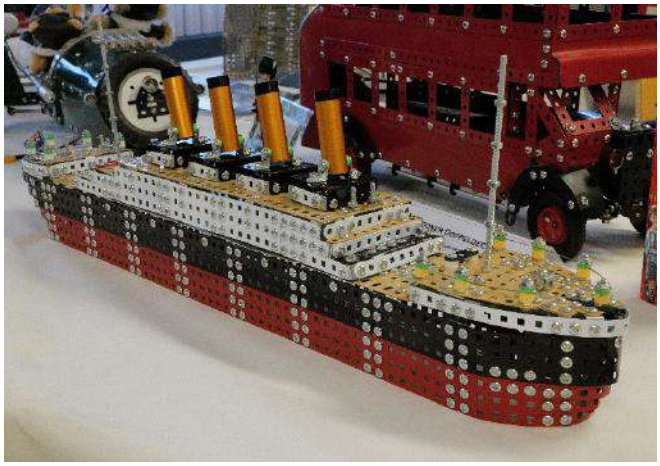
On the next page you can see cranes again. They are obviously gladly taken as a model for building.

A harbor crane from **Wilfried v. Tresckow**.



Another (third) floating crane from **Norbert Klimmek**. Anecdote: Norbert explained to a visitor that it was an Austrian floating crane. The visitor felt duped until Norbert assured that Austria had a navy in the Adriatic before 1918 and that the crane was in use there.

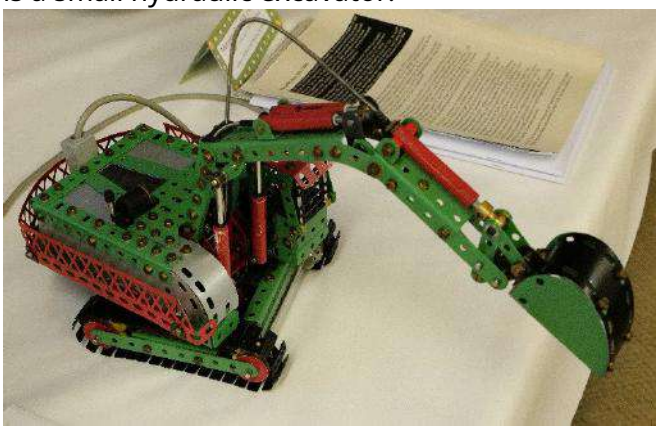
The Titanic is also from well over years ago, here as a Tronico model by **Marja Ahlbrand** built.



Michel Bréal brought a cargo boat that could be unloaded by a very large crane. The corn kernels were transported from the boat onto a conveyor belt and from there to a freight car. Everyone was allowed to move the levers.

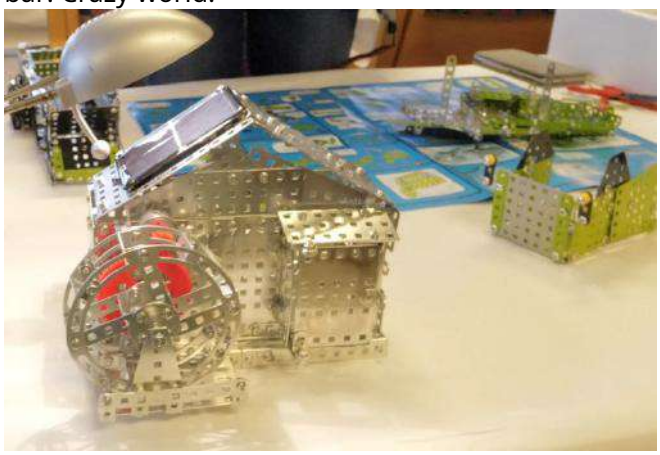
from **Michel Bréal** there was also an excavator grab that got by with just one cord and alternately opened and closed. It had a flip-flop mechanism similar to the one known in another form of ballpoint pen.

Wilfried v. Tresckowalso showed an excavator that he built based on a design by Michel Bréal. It is a small hydraulic excavator.

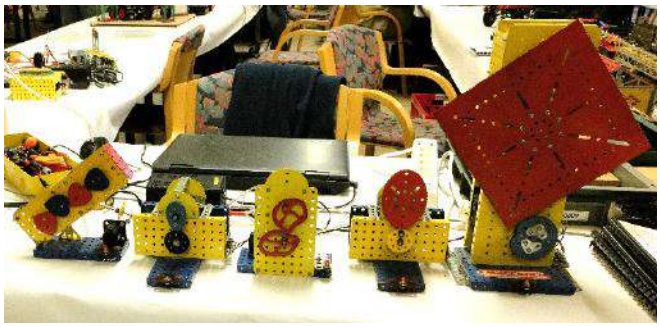


Georg Eiermann In addition to the Hachette blocksetter, they also presented an excavator: the model of a Fuchs 301 cable excavator with a wide range of functions.

Marja Ahlbrand worked on a Claas combine harvester from Tronico on the days in Bebra and exhibited a solar-powered watermill from the same manufacturer. Actually, the sun lets the grain ripen, the combine harvester threshes and the miller grinds it in the water mill. Here the sun drives the mill in the form of a small lamp via a solar cell and an electric motor and the grain is "processed" at the bar. Crazy world!



Show other crazy things **Bernard and Jean Garrigues** with their rather out-of-round gears ...

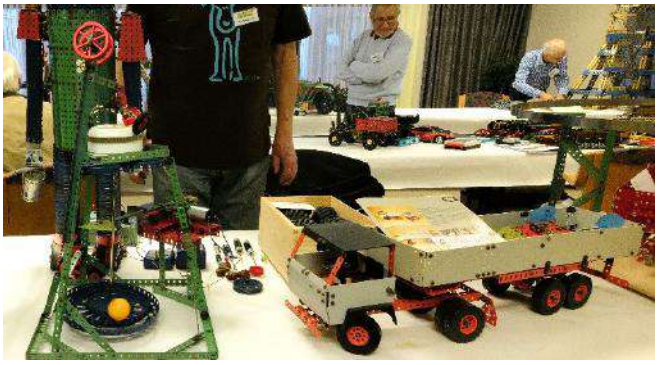


... and a Meccano shooting gallery that worked with LED light, in which you should hit a Meccano duck with a beam of light from a Meccano “rifle”.

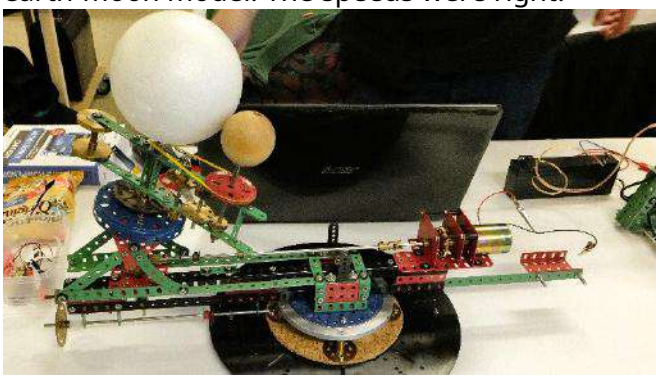
On the next page you can see a large model from France.

Bernard Beguin brought a very large Ferris wheel from Meccano of the blue and gold era. It was at the entrance of the room, where you can also see the box with Lake Constance apples that Norbert kindly brought us. A nice and tasty tradition.

Wolfgang Nicke presented a truck from the orange series from Märklin and a "work of art" that made something move and encourage viewing. Art because it has no real role model.

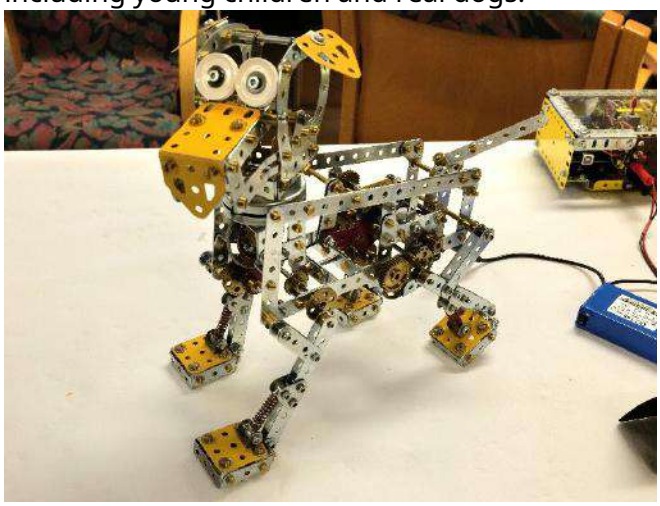


Helmut Wendler showed a not to scale sun-earth-moon model. The speeds were right.

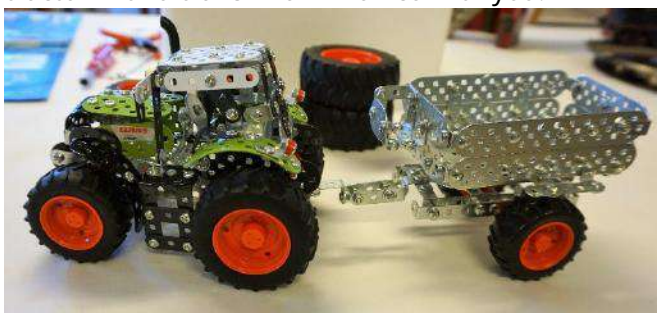


In addition to many historical stable kits presented us **Jürgen Kahlfeldt** a really useful model: an office chair made of Stabil.

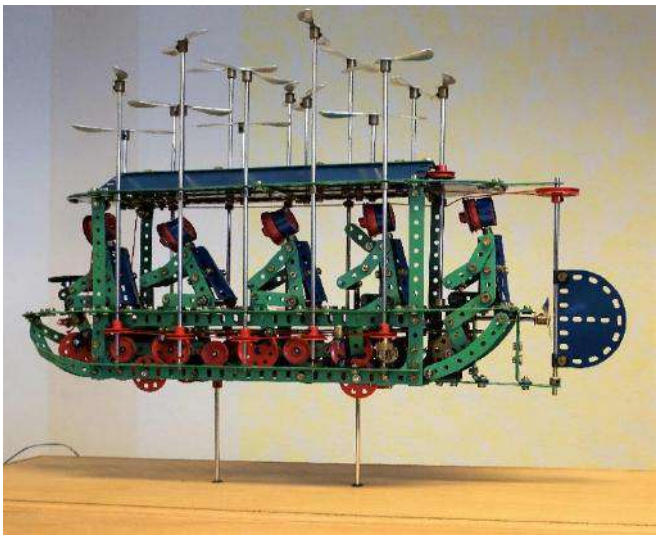
Fabian Kaufmann brought his little dog, Robodog, much to the delight of all visitors including young children and real dogs.



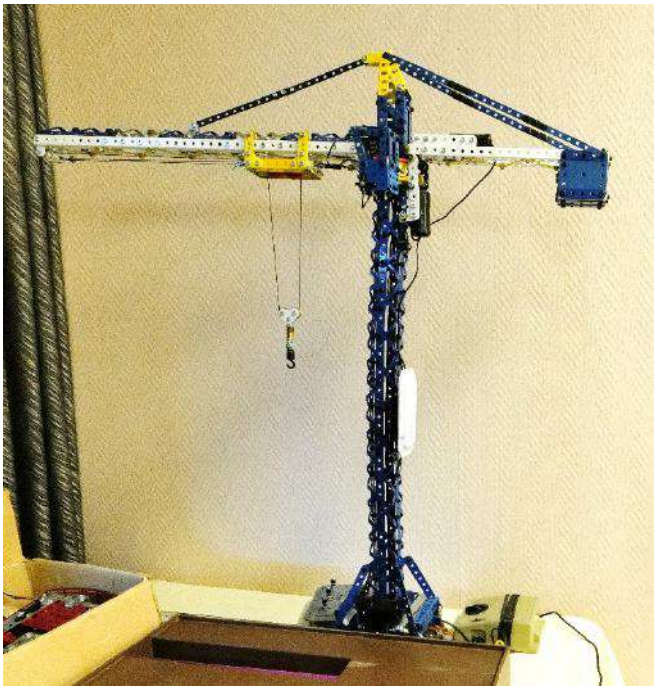
Marja Ahlbrand Not only tinkered with your combine harvester, but also had a ready-made Claas tractor with a trailer from Tronico with you.



These Märklinists from **Andreas Abel** tried, kicking, but in vain to oppose gravity. They were screwed on.



Jean-Pierre Guibert provided this tower crane with the remote control of another crane model from Meccano ...



... and presented a nice parade of locomotives

Jan Andreassen hides behind his Meccano Ferris wheel.

One of the two in the picture on the left is **Wolfgang Nicke**, the other was from screwed him.

I have tries, Everyone Models once to show briefly. I also have several publish more videos light:

https: // y-outu.be/lc6pgliMGTk - with moving models

https://youtu.be/9K2DiKzALhE walk through the room once

https://youtu.be/OdJ1DYlJf-8all my still images every 5 seconds

https://youtu.be/ImS5X9-7Bp0 Still images every five seconds of the construction of the giant floating crane from **Geert Vanhove** and **Jeannette Boot.**

In the next issue the collectibles from Bebra will be presented.