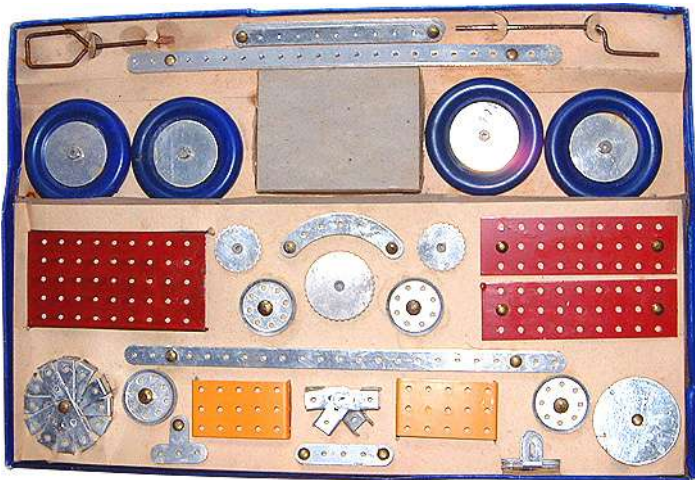


EDITORIAL Several readers have asked if the Database on the OSN web site can be printed out. As far as I can tell it isn't possible to print the full width using Internet Explorer – several of the righthand columns plus the COMMENTS column aren't printed. And even then thick vertical lines appear which weren't in the original. By chance though I found that the Firefox Mozilla browser gives a more satisfactory result. If Landscape and Shrink To Fit Page Width are selected in Page Setup the result is that all columns are printed with a small but readable text size. The COMMENTS though are printed as several short lines instead of the original long one and this increases the number of A4 sides for the whole Database from 34 to 41 (with the default margins).

Shorter NOTES, with thanks to all contributors.

1. **JR ENGINEER** Kendrick Bisset wrote that his No.4½ set is virtually the same as the one described in 22/632 & 33/975. The only differences are that it contains only four 5h Strips instead of 6 – still clipped down in each case, and 50, 4, & 40 of Bolts, Long Bolts, & Nuts. Also the lid on the box of small parts is the CONSTRUCTION SUPPLIES one mentioned in OSN 33 and not the plain card one in Jacques' set below.



The manual too is the same and has 'Copyright 1946, Coledi, Inc., New York' on the inside front cover (as in fact did the OSN 22 & 33 examples). Kendrick also has an identical manual except that it has a typewritten yellow sticker on the top of the front cover (above the 'JR EN' of JR ENGINEER), which reads 'MODELS, COPY and LAYOUT by / HARRY SNYDER / 138 E. 34 St. / N.Y. 16, N.Y.' At the top of the sticker are the remains of the last line, as if many labels were typed and cut or torn apart.

JR ENGINEER: S4 [40/1196]

2. **HELLER'S STAHLBAU** Thomas Morzinck has found a review of this German 'DIY' system (see 36/1083) in the January 3rd 1937 issue of Die Sendung (a German Radio Times). It speaks of it as being new and no doubt it would have been in the shops for Xmas 1936.

HELLER: S6 [40/1196]

3. **Snippets: Double-barrelled MERKUR** As can be seen on the lid right (actually the top of a sleeve), the set is being sold under the name EBERT MERKUR. Ebert GmbH was the Munich firm that sold Czech-made EBS sets some years ago (see 22/643) but the present Ebert may not of course be the same company. Another set from the same Ebay seller features a 77 part Windmühle but the name at the bottom is WIFRA MERKUR. From Google a number of German firms have Wifra in their names.



For both sets the sleeve covers a wooden box, 16*16*5cm, with a sliding lid, an unusual and perhaps slightly extravagant touch for a set of this sort. An example can be seen below in another WIFRA MERKUR set, this time called Gärtner mit Zwei

Karren – Gardener with Two Barrows.



Karren – Gardener with Two Barrows.

All the models come from the MERKUR range, and the parts too of course although I don't recall what appears to be a blue-handled Screwdriver in the open box.

MERKUR [1] S6 [40/1196]

4. **STABIL** On the basis of 5 documented sets Werner Sticht has discovered that the N&B used during 1911-1914 were unusual in two respects. First, the Bolts were brass and the Nuts steel, and secondly, the thread was not the usual 5/32" BSW (as in MECCANO) with 32 tpi, but a similar thread with approximately 33 tpi. The two are of course incompatible and a 33 tpi Nut on a 32 tpi Bolt will jam after a few turns. The pitch of a 33 tpi thread is .77mm – not a likely metric standard and the reason for the change is at the moment a mystery.

STABIL: S5 [40/1196]

5. **THALE** Graham Aldous is continuing to research the history of this East German system and I hope to be able to include his findings later on. One thing has emerged though, the summary chart in 38/1138 is incorrect for the early years because the parts & manual thought to be from 1957 are almost certainly earlier than 1955, and the change from the Motorcycle to the Jib Crane manual occurred in 1955-56.

Graham has also found that the pitch of the holes in some early THALE parts is 12.75mm, instead of the 12.5mm later. This led me to check the pitch of the parts described in 38/1138 and (to my shame, that I hadn't done so before) I found it to be 1/2" or very nearly (12.7±.02mm in the various different types of part).

THALE STAHLBAU TECHNIK: S4 [40/1197]

6. **FAC** Jacques Pitrat wrote that the FAC web site, www.facsystem.se, contains much of interest. As well as details of the current products there are photos of a number of models, old sets, and also pdf files of old manuals including 4 in English. The site has English, French & German language versions as well as Swedish.

FAC: S1 [40/1197]

7. **MERKUR in 2008**, from the English version of the Merkur web site. Little has changed since 2007 (see 37/1103) except that the American M-KUR Apache set has appeared as the MERKUR Helikopter Set (#3314) with 486 parts, and the same model on the lid.

Both the Classic C01 and C02 sets are listed with the same reference number, 3345, and the difference in weight between the two seems to be because the C02 is in a wooden box.

One correction to 33/991, the Set 030 has 310 parts.

MERKUR [1] S7 [40/1197]

8. **Snippet. FERROX** A No.2 set similar to the 'in between' one noted in 38/1134 was offered on Ebay. It was not so complete, the main parts missing being the Flanged Plate and the 1*5*1 DAS. Also the the tools were a wooden-handled Screwdriver, & a Spanner with one open end and a ring at the other – similar to the one in the Phase 3 set in Fig.3b of 36/1090.

The most notable difference though was that certain parts were painted a medium blue. These comprised the Large Flanged Disc, the longest DAS (1*9*1h in this set, a size not mentioned before, but the length of the long DAS in the OSN 38 No.2 couldn't be seen), and the 5 & 11h Strips (the latter the longest in, or remaining in, the set). The only other painted parts were the green 6*10h Perforated Plate and the red 1*3h SAS, the same shade as in the OSN 38 No.2.

The present set's box was said measure 35*21*2.8cm and the maker was Dröslar as before.

FERROX S4 [40/1197]

9. **Snippet. THE THATCHER TIN CAN TOY** The picture inside the lid of the wooden box for this 'DIY' set was shown in 33/973. An Ebay set in the same box, 17*10*3 1/4", contained some tools and a booklet ©1920 entitled Gilbert Tin Can Toy Making. The set is pictured in it and the contents that can be seen include a mallet, scribe, pliers, snips, dividers, ruler, bending jig, forming block, soldering iron, & some smaller items.

THE THATCHER TIN CAN TOY: S2 [40/1197]

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Payments Please make cheques etc payable to P.A.Knowles. Remittances must be in Pounds Sterling (GBP) or, as cash, in Euros or US Dollars (£1=€1.10=\$1.50). Payments from overseas may also be made using PayPal (in Sterling please).

Small Ads Short ads are free to subscribers; insertion guaranteed in OSN 41 if received by the end of July (but repeats may not always be possible, please ask).

10. **STAHL-BAUKASTEN** Since the Snippet on this early post-WW2 German system in 38/1160, Jürgen Kahlfeldt has kindly sent more details, via Thomas Morzinck.

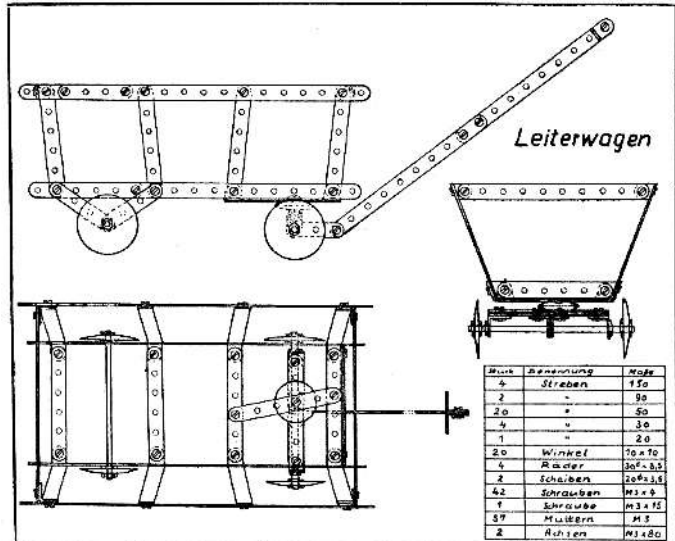
The parts are made of .7mm thick aluminium, and the holes are 3.3mm Ø at 10.0mm pitch. Below the set contents given

Inhalt des Kartons:

Stück	Bezeichnung	Beulänge	Stück	Bezeichnung	Abmessungen	Stück	Bezeichnung	Abmessungen
4	Blechstreifen	10mm	26	Winkel	10 x 10mm	1	Grundplatte	100 x 60 x 10
11	"	20	2	Winkelstücke	100 x 10 x 10	4	Schrauben	20 x 3,5 ^ø
6	"	30	2	Schrauben	M3 x 15	4	"	30 x 3,5 ^ø
2	"	40	51	"	M3 x 4	1	Schraubenzieher	
25	"	50	60	Muttern	M3	1	Schrauben - schlüssel	
16	"	90	2	Gewindestifte	M3 x 80			
4	"	100	2	"	M3 x 30	1	Vorlageheft	
4	"	150	2	"	M3 x 20			

on the front of the manual. In order, the parts are 4,11,6,2,25,16,4,4 of 10,20,30,40,50,90,100,150mm Strips (those lengths are overall so perhaps the 10mm is a sort of washer); 26 10*10mm A/Bs; 2x 100mm A/Gs, 10*10mm in section; 2,51 M3 Bolts, 15,4mm long; 60 M3 Nuts; 2 each M3 Screwed Rods, 80,30,20mm long; 1 Flanged Plate 100*60mm; 4 each Discs, 20,30mm Ø, and (probably) dished by 3.5mm; 1 each Screwdriver, Spanner, Manual.

The manual has 8 pages including covers – the front as in OSN 38. 6 models are shown on pp2-7, one to a page, with a 2- or 3-view engineering drawing for each, plus a list of parts. The first model is the Leiterwagon below (slightly rearranged),



and the last is Treppe (a Stairway with Landing). The other models are the Slewing Crane, Radio Tower, & Electric Pylon on the lid, and a Girder Bridge. The back cover has the side elevation of 5 more models including a Lorry, another Crane, and a Guyed Pylon.

STAHL-BAUKASTEN [2] S2 [40/1197]

11. **PHILIPS** In 39/1187 the change from colourless to red Wheels was associated with the introduction of the new sets ME 1201 & 1250, which replaced the ME 1200 outfit. But the change seems not to have been so clear cut because Paul Goodman has found red Wheels in one of his three ME 1200 sets.

PHILIPS: S9 [40/1197]

OSN – Your Credit Balance:

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is after this Issue

Please send at least £ if you wish to receive the next Issue.

KW-Metallbaukasten It is mentioned in Baukästen that Karl Wagner produced 2 sizes of KW-Metallbaukasten in Berlin around 1947, but apart from a KW logo (Fig.3), no other details are given. But now Jürgen Kahlfeldt has sent, via Thomas Morzinck, copies of 2 model sheets, and details of 2 lots of parts thought to be most of a Set 1 and most of a Set 2. My thanks to both Jürgen & Thomas.

From their PRs one sheet is from 1947 and the other from 1948. Karl Wagner, of Kottbusser Ufer 7, Berlin SO 36, is shown as the maker on both but the name KW-Metallbaukasten isn't on either – the 1947 sheet does feature the Baukasten logo, but it isn't on the later one.

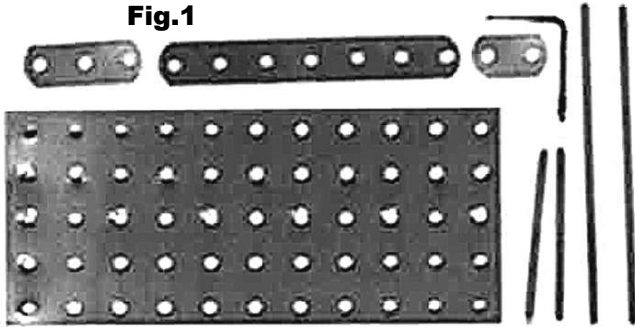


Fig.1

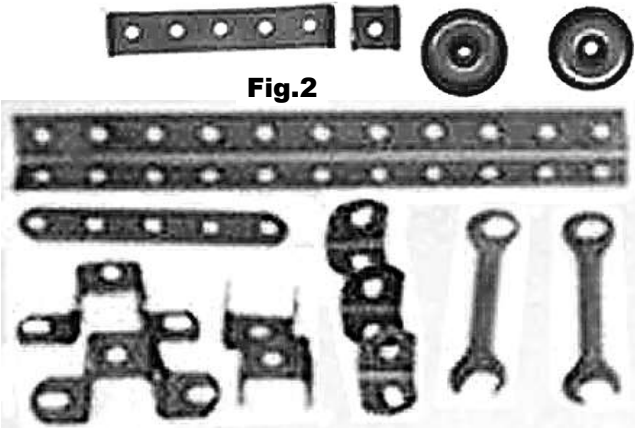


Fig.2

The PARTS All the known parts except the 15, & 22h Strips, and the 25h A/G, are shown in Figs.1 & 2. In each figure the parts are a collage of snips from larger photos (taken from overhead for Fig.1 and obliquely for Fig.2) and are not all to exactly the same scale.

All the parts are plain steel. The holes are 3.1-3.3mm at 12.5mm pitch. The thread is M3. There follows a list of all the parts with comments and, in curly brackets, the quantities found in the Set 1 & Set 2 lots (the Sets are believed to be progressive). In the Set 2 lot the thickness of the parts varies from .5mm for the Brackets to 1.0mm for the Plate – the Strips are .65mm

- **Strips** 2h {2,5}, 3h {2,0}, 5h {6,10}, 7h {2,4}, 11h {2,8}, 15h {0,5} 22h {0,3}. 12.2 to 12.4mm wide, all with closely cropped ends.
- 1*5*1 **DAS** {2,2}.
- **A/G** 11h {2,2}, 22h {0,4}, with square corners. Is KW the only system to have 22h parts?
- **A/B** {8,10}.
- **D/B** {1,2}.
- **Double Bent Strip** {0,2} with slotted holes in the feet.
- **Pulley Disc**, 2h Ø {3,4}.
- **Perforated Plate** with square corners {1,1}.
- **Screwed Rods**: Long {2,0}, Short {2,0}.
- **Wire Handle Crank** {1,0}, a STABIL-style part.
- **Spanner** {2,0}, the ring end is cranked.

The MODEL SHEETS Both are about A4 size, printed on both sides by Heine & Weber of Berlin, & probably folded once.

The PR of the 1947 Sheet is '117, 7000.6.47 4679' and Fig.3 shows the 'front', with the logo. The small print on the left is the maker's details, and on the right 'Vorlagen für Baukasten Nr. 1 u. 2'. 6 small models are shown without mention of which set is needed for them; all could be made with the parts in the Set 1 lot except that one needs 8x 5h Strips. None of the models run on wheels.

The PR of the 1948 Sheet is '117, 2000.4.48 4679'. The 'front' now has 2 models on it and no reference to Sets 1 & 2. All the 1947 models are shown plus the two, at about the original size, in Figs.4 & 5. They are labelled that they can be made with Set 1 if the parts in the model are used slightly differently. As they stand the Press needs 8x 5h Strips and the Hoist no extra parts though 4 Pulley Discs would be desirable.

All the models were taken from a prewar Set 49 STABIL manual and the drawings are exact copies except that where appropriate the lines on top of the STABIL Flanged Plate have been redrawn to indicate that the KW Plate & 2 A/Gs should be used instead. Also some but not all of the slotted holes in the STABIL parts have been changed to round ones, and in the Hoist the words on the end of the load – W & Co. / Stabil – have been blacked out. Incidentally, in the Press the N&B needed to fasten the A/Gs to the Plate are not shown.

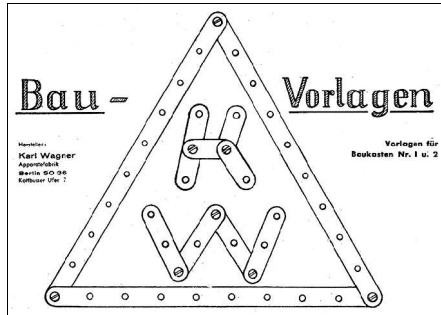


Fig.3

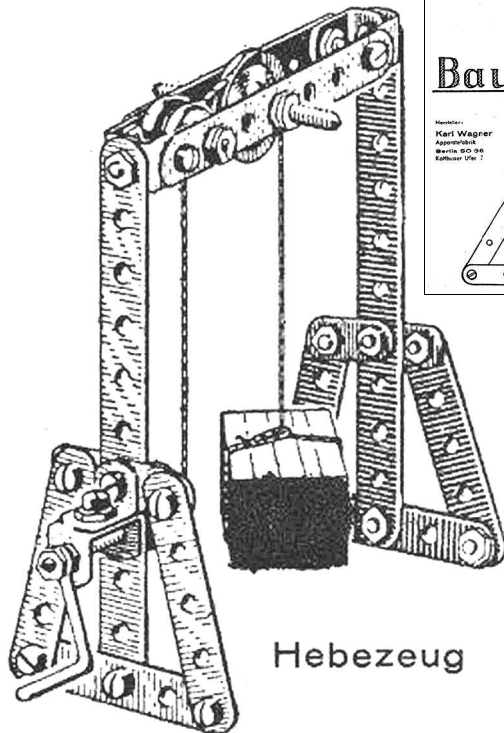


Fig.4

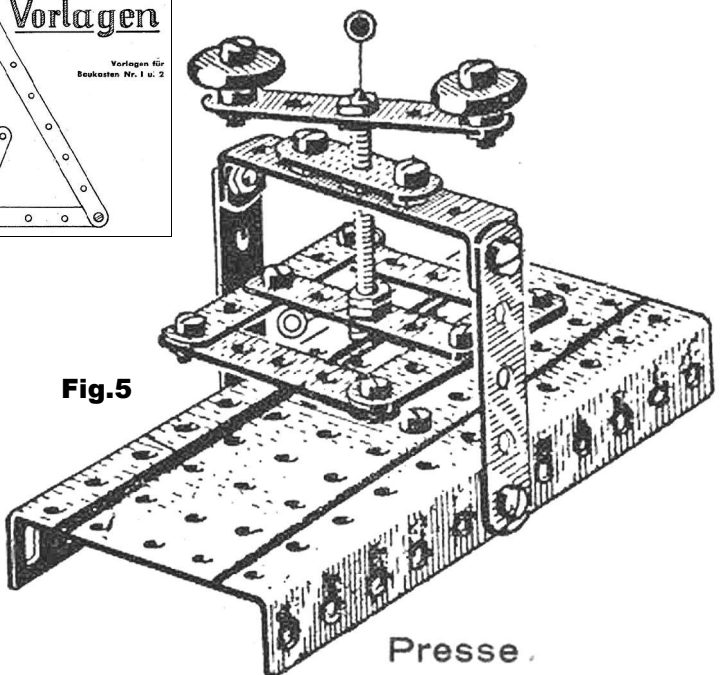


Fig.5

Snippets. More MÉCAVION The two original sets, and the Motor for them, were described in 26/754. This account mentions the changes which subsequently occurred to the



Fig.1



Fig.5

numbering & packaging of these 'classic' sets, and to the colours of the parts. And it also describes the various new outfits with different parts that were added over the years. These comprised two different series of 'Baby' sets and two post-WW2 outfits, one for modern multi-engined machines, and one for jet aircraft. Most of the material used has come from Ebay photos, but my thanks also to Jacques Pitrat for his help on particular aspects.

The MAKER A leaflet from sometime in the 1930s gives the maker as Ets. M Coudray of Fourchambault (a small town near Nevers in central France).

The CLASSIC SETS

The ORIGINAL SETS As explained in OSN 26 these were the basic outfit called Standard and an add-on Complémentaire. 5 such sets have been seen, with the lid described in OSN 26 (Fig.1). Of these 4 Standards are in brown boxes with all silver parts (apart from the roundels & tail flashes). The one Complémentaire set is also in a brown box and the parts are shown in Fig.2. The Motor was available in this period.

The NUMBERED SETS Again from OSN 26: by 1934 the sets were numbered 000 to 7, with the Standard becoming No.1 and the Complémentaire No.3. The 0, 00, & 000 were smaller sets with, as will be seen, some different parts, and the other sets, none of which have been seen, were the No.3 in two parts; an outfit combining Sets 1 & 3 (No.6); and sets which included the Motor, Nos.5 & 7 based on Nos.1 & 6.

Three of the numbered sets have been seen, all with the Fig.1 lid: a No.1 with all silver parts, and a No.3 with red/silver parts. Both are in brown boxes and both have an OSN 26 type manual.

Before going to the third set, mention of 3 other sets, all probably No.1's but

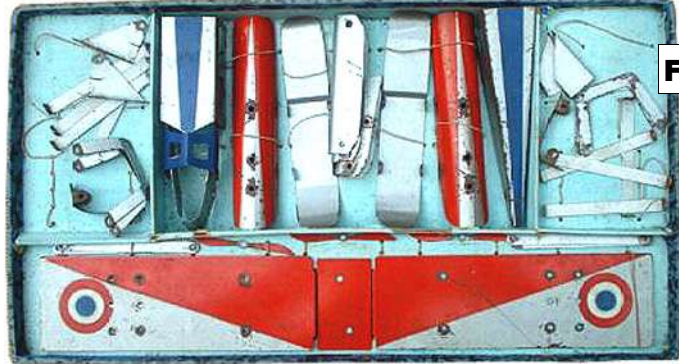


Fig.2

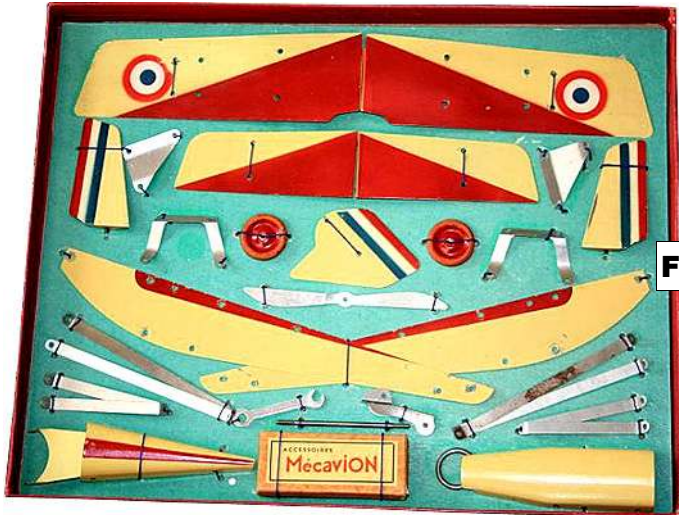


Fig.3



Fig.6

not positively identified as such They could come after the first two sets (above) and before the third (below). They have the same Fig.1 label and the colour scheme mentioned in 26/756, with 'diagonal' wings, and the 'teardrop' fuselage (above). 2 of the 3 sets are in blue boxes with red/silver parts and the third has a brown box with the red on the fuselage parts replaced by blue.

The third definite No.1 is typical of later sets. It has yellow/red parts in a red box (as in Fig.3, a later set) with a completely different flash on the sides of the fuselage. The new lid label (Fig.5) is seen for the first time, and the instructions, headed 'Standard', are pasted inside the lid. The 7 models shown are those for the Standard set in the OSN 26 manual. The later example in Fig.4 is identical except for the heading.

In the 1930s leaflet mentioned earlier an additional outfit, No.8 Coffret de Luxe was

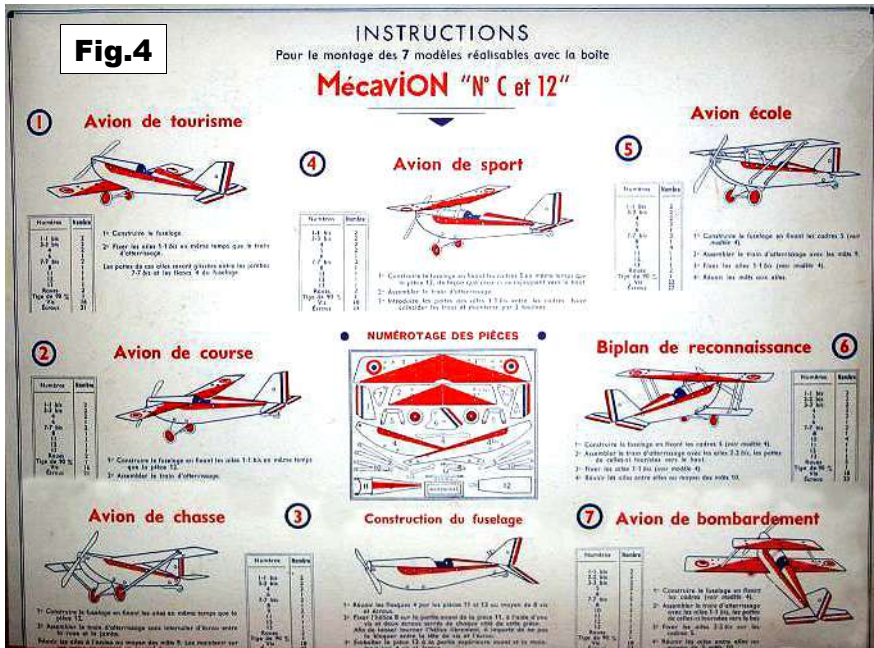


Fig.4

included – no doubt with the same content as the No.7 but with different packaging.

The LETTERED SETS The set designations were changed to letters. A lettered Baby set has been seen but no Classic sets. However they probably existed because the instructions in the lid of a set identical to the No.1 (Fig.4) are for sets 'C et 12'.

The DOUBLE-DIGIT NUMBERED SETS Set 12 was part of the range after this final change to the numbering. Both No.12's seen have the same parts as the No.1 except that they have wire Screwdrivers (with MECCANO shaped handles) instead on the wooden-handled ones in earlier sets. One was said to be from the 1950s. One of their open boxes is shown in Fig.3 and the inside of the lid in Fig.4.

Two other double-digit boxes have been seen, No.14, the Motor, in a red box with a plain yellow label, and a new set No.15 described later. So, assuming that it existed, No.13 would have been the successor to the Complémentaire/No.3 add-on outfits.

The BABY SETS

There were two series of Baby sets with many of the parts quite different, and I'll call them Types 1 & 2. It's not known when the first outfits were introduced but their lids were in the Fig.1 style. Nor is there a date for the second phase, and though all have the final, Fig.5, style of lid, it was also used for some of the Type 1 outfits.

TYPE 1 with the FIG.1 LABEL The first lids were blue



Fig.7

with labels which differed from the Fig.1 pattern in only a few details, notably by having the set name across the tailplane (instead of 'Amuse et Instruit'). A Price List with one such set was dated 12/34.

Set 00 Most of the parts can be seen in the set above, in a box 24*43cm. The main Fuselage is in one piece and the part in the top left corner fits into it to provide the nose and under part of the front of the fuselage. It appears to be the casing of the Motor unit in Fig.8. Of the other parts the red Centre Top Wing (top, right) is new, & the narrower Floats, but most of the other parts appear to be from the Classic range. Possibly not the Fin though, it seems a little smaller with no centre hole. The holes in new parts are about 3mm, smaller than the 3½mm of the classic pieces. The old and new parts marry together quite well in the models. The 4-page instructional leaflet has 'Type "Baby" 0 et 00' on the front and 8 models are shown on the other pages with written instructions for each.

Set 0 Subject to confirmation, it was identical to the 00 except that it included the Motor Unit instead of just its Casing. Said Motor Unit has a prop shaft at the front and a large contrate underneath which meshes with a pinion on the undercarriage Axle. (One Ebay seller mentioned a missing Key so presumably it is clockwork and not simply the prop shaft



Fig.8

geared to the contrate so that the Propeller turns when the model is pushed along the ground.)

Set 000 No examples of a 000 from this time have been seen but a later Type 1 Set 000 is described below.

TYPE 1 with the LABEL BELOW Only 'Baby' sets have been seen with this lid label.



Fig.9

Set 0 The set seen is in a blue box with a model leaflet as in the No.00 already described, and with the same parts except that the Floats look to be the wider Classic type. A similar set, but probably a No.00, has the same wide Floats, and has the instructions glued inside the lid. None of the other Baby sets seen, earlier or later, with this type of label or otherwise, have the wide Floats.

Set 000 The next two sets have brown lids, and are probably both No.000. The first, 28*16*2.8cm, looks unused and has a Motor, no Floats, no Struts, only 2 Wings, and the parts are painted all silver with only the usual roundels & flashes as decoration. It was said that there were instructions for 2 models. The few remaining parts in the second set match those above and there are instructions inside the lid (in B&W) for 2 models (the only ones that would be possible, a Low Wing and a Shoulder Wing Monoplane). They include an illustration of the Motor Unit.

New Colours The next set is in a red box with the Model Leaflet for Sets 0 & 00, as before. The parts too are as before except for their colours. The main parts are yellow, with the Fuselage nose and the flash on the Floats blue, and the coloured triangles on the Wings red.

TYPE 1 with the FIG.5 LABEL The sole set seen with this label is a No.000 in a red box. The only remaining parts are the Fin and Tailplanes, silver with the usual flashes.

TYPE 2 All the sets have the Fig.5 label and all, except as noted, have red boxes.

TYPE 2 NUMBERED Sets Of these first sets, examples of Nos.00 & 000 have been seen and neither include a Motor.

Set 00 The parts can be seen in the box below, and in a model overleaf, made from a later equivalent outfit. The parts that are definitely new are the Wings, Fin, Nose (to the right of the LH Float), the Float, the 'V' Interplane Struts, 3-bladed Propeller, and Span'driver. The Fuselage could be the same as before though the models are said to be 23cm long, against the 21cm quoted for Type 1. The span is also slightly greater – with the Wings bolted



Fig.10

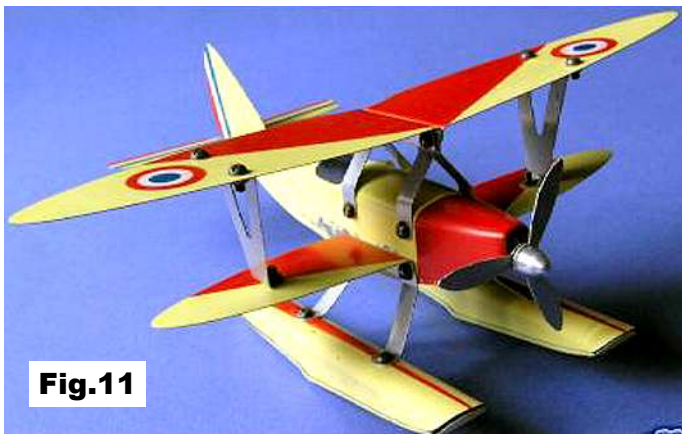


Fig.11

against 29cm. The instructions, for 8 models, in black & red, are inside the lid. The box size is 35*21½cm.

Set 000 has no Small Wings and no Floats. The instructions, again inside the lid, are for 3 model (the Centre Wing Struts are included in the Set so a parasol wing model is possible). Jacques has one of these sets and its box is 30.7*17.8*3.7cm.

Set 0 It would be strange if there was not a Set 0 at the time and it ought logically to be the 00 with a Motor, though no indication has been found that there was a Motor in the Type 2 era. Or possibly the old No.0 was simply continued alongside the new sets.

TYPE 2 LETTERED SETS With the change to lettered sets the 000 became Set A and the 00, Set B. And as Set C was a Classic set there were presumably only two Baby outfits. The only box seen, a Set A, is light brown and was said to measure 37½*21½cm.

TYPE 2 DOUBLE-DIGIT NUMBERED SETS When numbered sets were reintroduced A & B became 10 & 11 respectively with the same parts, instructions, and colour scheme, except that the nose of the Fuselage was painted red, as in the Fig.9 model. The No.10 box measures 34½*21½cm.

The MULTI-ENGINED OUTFIT

The Set was called Pilote d'Essais (Test Pilot) and it has a single layer of parts in a red box about 51*35cm. The featured model (right) is: Avion type Boeing 'La Forteresse Volante' (The Flying Fortress). The label, below, has photos of 3 of the stars (Clark Gable, Myrna Loy, Spencer Tracy) who appeared in the MGM film Test Pilot. Said film was released in America in April 1938 and was probably shown in France in the summer of that year. But the name Flying Fortress was first used for the B-17 during WW2 and so it is unlikely that the Set was prewar. Perhaps the film was rereleased after the war. There is '1 Jan 1957' written in the top left corner of the inside of the lid (Fig.17). The '15' in the bottom right corner of the lid is thought to be the set number – it isn't on all the lids seen but



Fig.12

NOMENCLATURE DES PIÈCES			
401 d	Aile droite.	410	Tige entretoise.
401 g	— gauche.	411	Capot moteur supérieur.
402	Flasque droite.	412	— — Inférieur.
402 b	— gauche.	413	— — Avant.
403 d	Stabilisateur droite.	414	Hélice.
403 g	— gauche.	415	Atterrisseur.
404	Dérive.	416	Bec-entretoise.
405	Nez de Fuselage.	417	Ressort.
406	Capot Fuselage Supérieur.	418	Roue.
406 b	— — Inférieur.	419	Béquille.
407	Cabine avant.	420	Mât d'antenne.
408	Pare-brise.	421	Colerette.
409	Cabine arrière.		

Fig.13



Fig.14

it looks to be a label and so may have been prone to fall off.

Fig.13 is a list of the parts in the Set as given in the Instructions and the major ones can be seen in the open box above (one Wheel is missing), and in the model below. Assembly of the models is mostly as would be expected but unusual or unexplained points are noted in the following list of the parts (as in Fig.13 but with my English names). **#401d,g Wings**, handed and flanged to bolt to the fuselage; **#402,b Fuselage Sides**, handed; **#403d,g Tailplanes**, handed and flanged at each end to bolt to the fuselage & to the Fins; **#404 Fin** (handed in the sets and models seen by virtue of

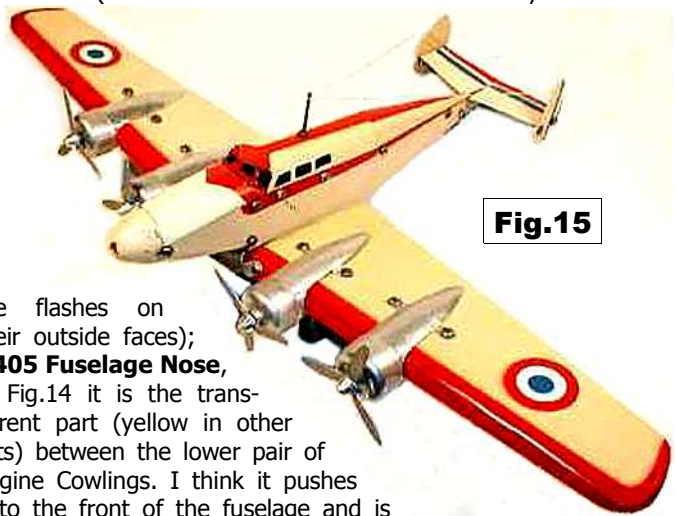


Fig.15

the flashes on their outside faces); **#405 Fuselage Nose**, in Fig.14 it is the transparent part (yellow in other sets) between the lower pair of Engine Cowlings. I think it pushes onto the front of the fuselage and is held under the head of the Bolt on either side of the front of the fuselage; **#406,b Forward Fuselage, Top & Bottom**; **#407 Mid Fuselage Top**; **#408 Windscreen**, is between the inner Propellers in Fig.14, and is probably held by the Bolt each side under the first side window; **#409 Rear Fuselage Top**; (The Fuselage parts are in the top row in Fig.14

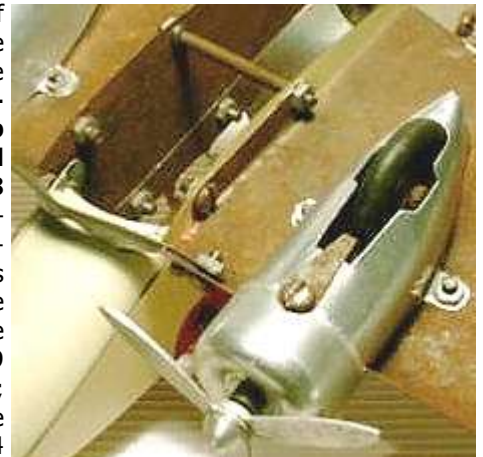
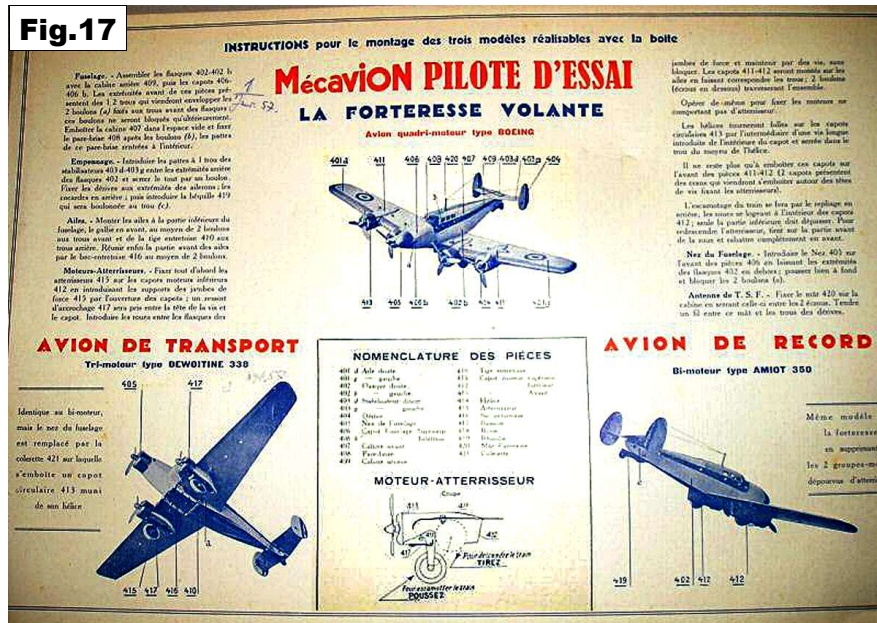


Fig.16

Fig.17



The JET MODELS

The model below, 17" long and 16" span, was seen first but there was no evidence as to its maker. It was clear though from the Instruction Sheet in a later photo (Fig.21) that it was indeed MÉCAVION. The Sheet is headed AVIONS DE REACTION, and describes how to build the fuselage of, probably, 2 models: 55/A & 55/B. It may not be clear here but in the original the silvery Brackets used to attach the Fin to the fuselage can be seen, and also the holes halfway up the Fin used to attach the Tailplanes. The first photos shows how the Wings were bolted on, and the holes in them for, possibly, the main undercarriage, or, perhaps, underwing stores.

and one has a red flash while on two it is blue. All are red in the other sets seen.) **#410 Threaded Rod**, used to join the Wings to the Fuselage Sides, see Fig.16; **#411 Upper Engine Nacelle**; **#412 Lower Engine Nacelle** – because of the cut out for the undercarriage in the inner ones there are two types but only one PN; **#413 Engine Cowling**: it fits over the front of the nacelle but it's not clear how it is held in place – perhaps it simply pushes on. **#414 Propeller**, held by a Long Bolt from inside the Cowling. **#415 Undercarriage Leg**, not seen and how it



Fig.18

pivots is unclear. **#416 Cross Brace**, joins the Wings at their leading edges under the fuselage, see left & Fig.16. **#417 Spring**: flat and tapered, it bolts onto the outside of the inner Lower Nacelle (see Fig.16) to lock the undercarriage up or down; **#418 Undercarriage Wheel**, red in some sets, black in others. **#419, Tail Wheel** assembly, see Fig.18 – it is above the right end of the right Fuselage Side in Fig.14. It looks to be the same as the part used in earlier sets. **#420 Aerial Mast**; **#421 Cowling Mount** – it is the part between the top Cowlings in Fig.14 and it replaces the Nose in the 3-engined model. A Cowling fits over it, probably a push fit as there is no other obvious way to hold it in place.

Bolts have a pan head and **Nuts** are hexagonal. A **Spanner** is above the left end of the left Fuselage Side in Fig.14, and the pink piece sticking out from under the Top Forward Fuselage (top left in Fig.14) could be the end of a **Screwdriver** handle.

Material The engine nacelle & cowling parts, and the Propellers, are aluminium, the rest of the parts steel.

The Instructions These are inside the lid (Fig.17) and in some sets the red lettering is blue. The 3 models shown seem to be identical except for the number of engines, and are about 34cm long with a wingspan of 54cm. The 2-engined model is the Amiot 350, a modern looking bomber which first flew in 1939. The 3-engined machine is the Dewoitine 338, an airliner from the mid 1930s. Strangely it had a single fin and so as far as I recall did all the 4-engined Boeing aircraft except the Clipper flying boat, and that had three. If La Forteresse Volante had had a shoulder wing it would have looked more like the WW2 Liberator bomber, and such a wing position would also have made the other two models more realistic. It would have been fairly straightforward to have included a single fin option in the Set, but a shoulder wing would have been more difficult to brace adequately, and would have made it difficult to have a retractable undercarriage.

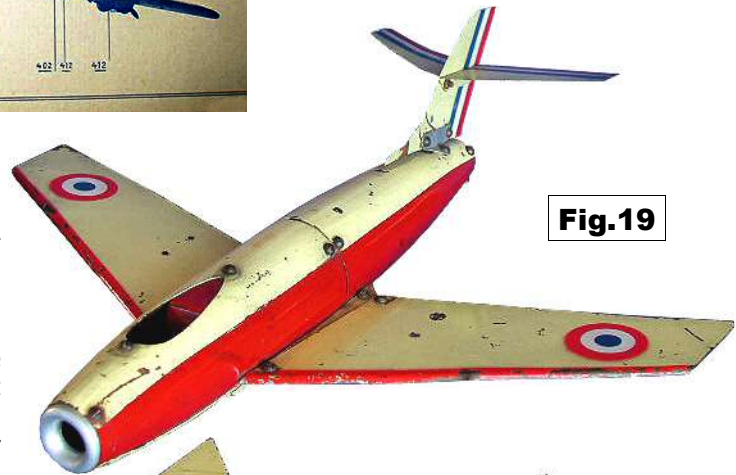


Fig.19



Fig.20



Fig.21

Snippet. 'New' German System: MEBAKA Right, the open box with the manual and lid propped up behind it. From another of the Ebay photos the lid label & manual cover are identical, apart from the blue 'floor' on the cover.

The Ebay notice said that the set was made by Firmer & Franke of 24b Tönning/Eider, a small town on the west coast of Schleswig-Holstein, across from Kiel on the east side. Also that from the '24b' postcode it would date from the 1940s – Wikipedia says that 2-figure postcodes were introduced in Germany in 1941 and ran until they were changed to 4-figure in 1962, but I haven't been able to find if the Tönning code changed at any point – I think that the present code includes '25' rather than '24' to denote the area.

It was also said that the box contained about 480 parts of which 95% were nickel and the rest plastic. The latter are probably the black parts in the top left compartment, with one or more Wheels or Pulleys of about 5h Ø; some 1½h Ø ones, and some small parts about the size of Collars. Apart from the Plates & Strips there look to be some Brackets in the centre compartment and perhaps some DAS. From another photo the round tins contain square Nuts about MECCANO size and Bolts of more than one length.

Right, two of the manual models, a Leuchtturm and a Brückenkran. It was said that the other models are: a Kugelbahn (Bowling Alley?); a Drahtseilbahn (Cable Railway);



3 Kränen (3 Cranes); a Windmühle; a Riesenrad (Big Wheel); and a Schwenkkran (Floating Crane).

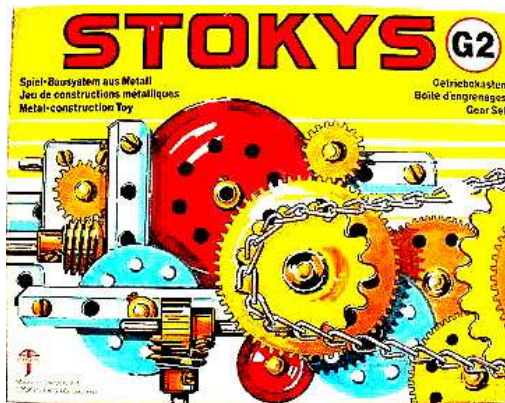
OSN 40/1203

MEBAKA: S1

STOKYS Update It was noted in 38/1132 that the company had changed hands and under the new management it is now possible to buy sets and parts from the Stokys web site. When checked last October the sets available were only the five basic outfits, 0-4, the linking sets 0a-3a, and the Gears Outfits G1 & G2. As far as could be seen the box lids were as before, see 11/291, and to amplify what was said there all the lids are yellow and the Gears lids are as right. No manuals were shown with any of the sets, and those listed separately are the 0-2 with the same cover as before, and the G1-2, not illustrated. No mention of Motors is made anywhere.

There are some changes to the parts relative to the last list to hand, from 2004, but before going to those **the changes between 2000 (see 24/687) & 2004** will be noted. The only ones of any significance were the addition of a Double Clip K15 (perhaps a part used in Stokys' earlier CLIP system), a Link K64 for the Roller Chain, and Ladder Chain K62 for use with the Gears (as opposed to the Ladder Chain K61 for the Sprockets – in passing the 2004 list also gives the old PN for K62 as 79c, so it was presumably in the system at some earlier time.) Also the Triple Pulley R51 was reintroduced.

The 2008 parts are listed on the web site with photos of some of them. It is impossible to see the whole range because the parts are listed under 15 main headings and then under a number of subheadings, and only those in one subheading can be seen at a time. To compare the range against earlier lists the list on the facing page was compiled and will provide a basis for future comparisons. The parts are listed under the 15



main headings with my English names and their new PNs (usually the previous numerals with a '0' in front, but sometimes a '1' or '2' denoting a modified part, often a change of colour). A few parts are a little difficult to describe concisely but the names are those used in OSN 23 & 24 and are illustrated (or fully described) there.

Compared with 2004 the parts no longer listed follow with their 2004 and, where they existed, their original PNs. • **Half Shafts** from the Differential, W03. • **200mm Screwed Rod** W22/90a. • **Single-Flanged Corner Gusset, Righthand** P54/51c. • **20mm Flanged Wheel** R21/59c. • **Double Gears** Z15 & Z17 (11/66 & 11/44t). • **Chain for Gears** K62/79c. • **Double Bearing Bracket** K41/78 (the cast zinc part). • **Nylon Bearing Strips**, 3 & 5h, K42/93 & K43/93a (invaluable with aluminium parts, a sad loss). • **Differential** K91/300. • **Rack Strips** W31/136 & W32, 11 & 22h. • **Emery Wheel, & Arbour** for it, T11/53a & T13/53. • **Track Link & Dredger Bucket**, W62/405 & W63/410. • All the **Lamps & their Fittings**. • The few remaining **5/32" BSW** threaded parts.

The new parts are shown in orange in the list right. Notable are an 85mm A/G; an Obtuse A/G; and 3 more sizes of Steel Ball. And perhaps the 'Bogen' Plate P060, depending on what it is exactly. In addition the Winch Drum, Bush Wheel, Face Plates, and Plastic Plates are available in alternative colours. The N&B are still blackened steel and the Nut is now listed as 6mm A/F, so presumably the 7mm size is no longer available.

OSN 40/1203

STOKYS: S3

Achsen (Axles)

- Crankshaft W001
- Crank Handle W002
- Axles W006/010-017, 60/30/50/85/120/150/200/300/500mm
- Screwed Rods with one smooth end W021/23, 100/40mm

Bügel (Brackets)

- DAS E031/032/035/037/041/042/043, 1*8*1/1*4*1/1*5*1/1*2*1/2*2*2/2*3*2/ 2*5*2h
- A/B E033/044, 1*1/2*2h
- D/B E036/034, 1*1*1/2*1*2h
- Double Bent Strip E038
- Reversed A/B E039

Geländer (Braced Girders)

- Braced Girders G021-024, 8/16/24/32h long
- Flanged Braced Girders G031-034, 8/16/24/ 32h long

Lager (Bearing)

- Roller Plate W041

Lagergehäuse (Channel Bearing)

- Flanged Plate 3*3h, G003

Lochbänder (Perforated Plates)

- 2h wide B011-017, 5/7/8/11/16/24/32h long
- 3h wide B021-025/026/027, 5/7/8/11/16/24/32h long
- 4h wide B037-041, 7/8/9/11/16/17/24/25/32/33/78h long
- 5h wide B071-076, 7/9/17/25/33/78h long
- Flat Girders B051-068, 1/2/3/4/5/6/7/8/9/11/15/16/17/19/24/25/32/33h long

Platten (Plates)

- Plates P031/042-045, 5*4/7*8/7*11/7*16h/5*8h
- Sector Plates P038/041, 5-3*5/5-3*7h
- Flanged Sector Plates P039/040. As P038/041 but 4/5h high with base 5h flange
- Corner Gusset P051, 5*5h
- Flanged Corner Gusset P052,053, 4*4/5*4h
- Bogen (Curved Plate?) P060
- Flanged Plates P032-035/075/077, 5*4/5*8/5*11/5*16/5*5/5*7h (which sides flanged?)
- Plastic Flexible Plates P036/037/046/047, 5*8h green/red/blue/yellow

Profile (Strips)

- Strips P002-014, 2/3/4/5/6/7/8/9/10/11/16/24/32h long

Räder und Pneu (Wheels & Tyres)

- Pulleys 12mm R001/002, with/without boss
- Pulleys 20mm with boss, R004/104, riveted (genietet)/brass
- Pulleys 35mm with boss, R006/106/116, brass/brass/aluminium, rivetted
- Pulley 60mm R007, aluminium
- Tyres RZ03/05/08/61/62, 24/33/54/Lorry 76/Wide 47mm Ø
- Triple Pulley R051, brass
- Pulleys 90/115mm R011/012, aluminium
- Flanged Wheels R022/023, brass, 25/50mm
- Winch Drums R031/131, aluminium, 35mm, red/blue
- Bush Wheels R041/141, 35mm, red/blue
- Face Plates 60mm R042/142/242, red/blue/natural
- Face Plates 116mm R043/143, red/blue
- Tyres with Hub R061/062/064/065/068, brass 76/brass 47/brass 24/brass 33/red 54mm.
- Balloon Tyres RZ71-76, 50/60/72/80/100/125mm
- Balloon Tyres with brass Hub R071-76, 50/60/72/80/100/125mm

Schrauben/Muttern (Nuts/Bolts)

- Bolt S003/008, 7/20mm u/h
- Nut S004, 6mm A/F
- Nuts G906-908, 100/200/500 of S004
- Grub Screw S026/S027, 4mm long, slotted/Allen head
- Grub Screws G911/923, 100 of S027/026
- Nuts & Bolts G902/904/905, 100/200/500 of S003+S004
- Washer S019, BZP
- Washers G921, 100 of S019

Verbindungen (Connecting Parts)

- Corner Bracket E021
- Flanged Corner Bracket E001/002, RH/LH
- Girder Bracket, 2h wide E011/012, 1*1/2*2h
- Girder Bracket, 3h wide E013/E014, 2*2h/Trunnion (E013 with cropped corners)
- Joint Plates E022/025, 2*2/2*3h
- Joint Plates E024/023, E025 with 1/2 cropped corners

Werkzeuge (Tools)

- Screwdriver, red handled, H001/003, 3.5/3.2mm wide
- Allen Key H009
- Spanner H002

Winkelschienen (Girders)

- A/Gs V001-008/009/014, 5/7/8/11/16/24/32/78/85/14h
- Obtuse A/G V011, 11h long
- 'L' A/Gs, 1*3h, G051-056, 8/11/16/24/32/78h long
- 'L' A/Gs, 1*2h, G061-065, 8/11/16/24/32h long
- 'U' A/Gs, 1*2*1h, G011-016, 8/11/16/24/32/78h long
- 'Z' A/Gs, 1*2*1h, G041-046, 8/11/16/24/32/78h long

Zahnräder (Toothed Wheels)

- Pinions Z001/002/004, 19t/19t long faced/11t
- Gears Z003/005-012, 57/66/26/52/38/76/40/136/170t
- Bevel Gears Z031/032, 26/64t
- Helical Gears Z021/022, 13/37t
- Worm Z041
- Contrate Gears Z061/062, 44/64t
- Sprockets Z051-054, 13/26/44/58t
- Double Gear Z016, 11/40t

Zubehör (Fittings)

- Ball Bearing K001
- Balls, K002, 31 for K001
- Ball K003-005, 4.77/3.64/10.00mm
- Collar K011
- Spring Clips K012/015/016, single/double 90°/double
- Coupling K013
- Dog Clutch K014
- Handle Crank K021
- Universal Joint K023
- Ratchet Wheel K051
- Pawl K052
- Eccentric K053
- Cranks K031-033, Double Arm/Single Arm/4h wide Double Arm
- Cam K034
- Sprocket Chain, Ladder, K061, 1m
- Sprocket Chain, Roller, K063, .5m
- Link K064, for K063
- Spring Cord, 80mm with eyes, K071
- Cord K073, 5m
- Hand Wheel H005, zinc
- Big End (Strip Coupling) T001
- Handrail Support T002
- Loaded Hook T006, zinc
- Tension Spring T007
- Hinge T008
- Threaded Pin T009

MODELIX Update Edmundo Veiga kindly alerted me to the changes to this Brazilian system since the account of it in 33/995. The very small sets have been replaced and a number of larger sets added, but the main change is the addition of several 'Robotic' outfits, two of them intended for use in schools. The amount of information given about the various sets varies considerably and some of the photos on the site are not of good quality.

THE CONVENTIONAL SETS To start with the small, usually single-model, sets. The 6 in the original range are no longer listed but instead there are 14 Mini and 5 Express sets.

• The **Minis** are called: Furgão e Kart (Truck & Kart); Learjet e Bombardeiro (Learjet & Bomber); Carreta (Cart); Rover Lunar; Agripa (a 4-Wheel something); Carro de Corrida (Racing Car); Caminhonete (Lorry); Helix (Helicopter); Sedan; Jipe (Jeep); Avião Bimodelo (2 Aircraft); Helicóptero; Buggy; & Motoca (Motorcycle). These have between 63 & 93 parts, and while some of the models are comparable to those for the earlier outfits, some are rather more rudimentary. They are packed in black boxes with a yellow, or some-times a pinkish, label, and the Learjet e Bombardeiro (2 of the more interesting models) can be seen in Fig.1.



Fig.1

• The 5 **Express** models are Beluga (right); Empilhadeira (Forklift); Autobus; Minicraft (Mobile Crane); & Trimoto (Trike). The models are even simpler than the Minis & all are shown on the box labels against a tiled pink ground, as in Fig.2.



Fig.2

The Larger Sets The OSN 33 sets mostly continue but the boxes are completely different, in, except where stated, the style of Fig.3.

The old sets still listed are: • **Multi 21**, the previous Multi 2. The '21' is the number of manual models (unchanged).

• **Frição 2**, **Mobil 2**, **Master 15**, as before. • **Master 17**, as before but the featured model on the lid is the Steam Engine. The Master 15 & 17 are marked Not Available.

The new sets are: • **Multi 5 & Multi 10** which replace Multi 1; they have 105 & 102 parts respectively for 5 & 10 small models. • **Mobil 3**, 188 parts for the motorized Car on the lid (Fig.3). • **Mobil 4**, 180 parts for the small Helicopter on the lid – it is motorized with a cord drive to the tail rotor. • **Guindasta**



Fig.4

602, a motorized Crane as on its lid above (Fig.4). 285 parts.

• **Guindasta 601**, a hand-operated version of the 602 with a similar lid. Both the 601 & 602 were 'Not Available'.

• **Combo 4**, with parts to make the 4 small models on the lid simultaneously.

• **Combo 5**, as 4 but for 5 models.

• **Combo 6** with 285 parts to make 5 small models and the Crane 601, 4 of which simultaneously. Another set marked Not Available.

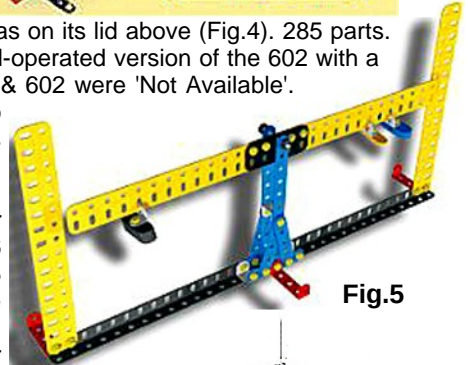


Fig.5

THE NEW 'SPECIAL' OUTFITS are:

• **Arquimedes II**, a set for experiments with Levers. 82 parts, plus full instructions and a CD. The lid shows the model in Fig.5.

• **Torre Eiffel Média**, a fair 68cm high Tower.

• **Torre Eiffel Grand**, a much better model (Fig.6), with 1889 parts. It stands over 1m high and the base is about 30cm square. The lid label is yellow with the Tower shown on it.

• **Xadrix**, an outfit to make a set of chess pieces (Fig.7). A MODELIX first! The box has the same style of label as the Torre Eiffel Grand.

THE ROBOTICS OUTFITS These fall into three parts.

• First there are 6 sets listed as **Robótica de Entretenimento** (Robotic Entertainment). The smallest is **Laboratório Iniciante** with 164 parts for the small Crane on the lid. Next the **Laboratório Básico** with 236 parts. The lid is shown in Fig.8 but the parts in the Set don't match those shown. The Set is said to give an introduction to the concepts of mechanics, circular to linear motion for example, and to facilitate the assembly of simple mechanical models. The other sets are **Laboratório de Rob-ótica Intermediário**, **Avançado**, & **Inteli-gência**, all versão 2.0. Their lids are all similar in style to the Avançado in Fig.9 with

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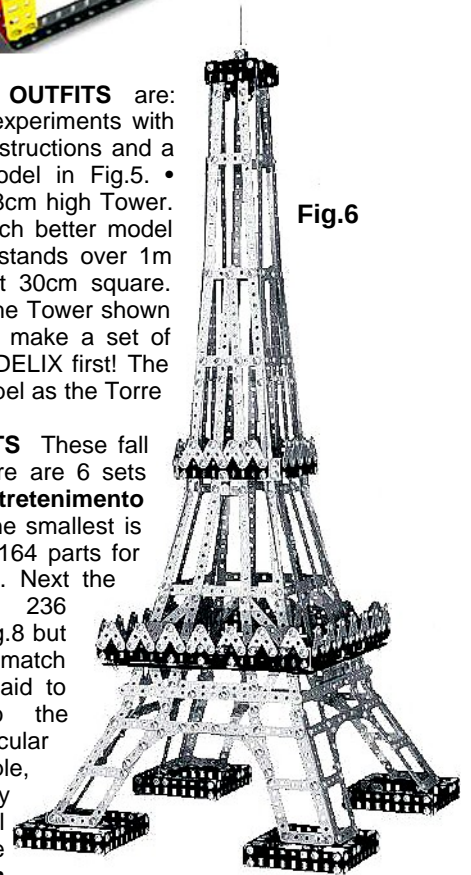


Fig.6

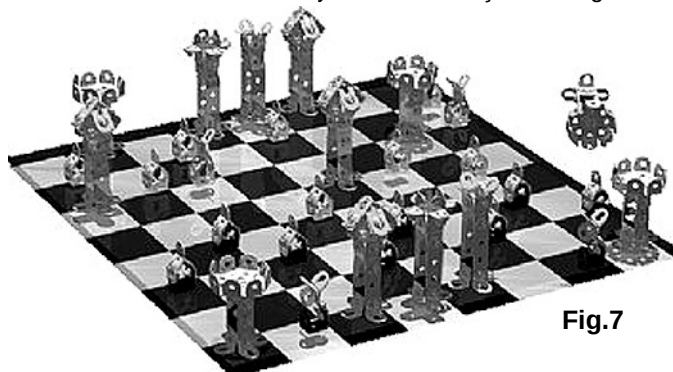


Fig.7



Fig.3

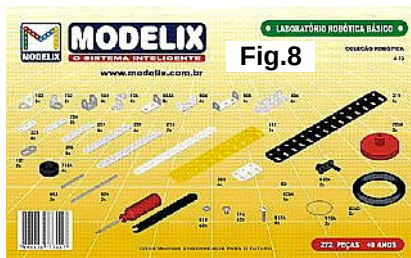


Fig.8

the same panel of constructional parts on each (see Fig.13). The 'Robotic' parts are listed in the top left panel and vary from set to set. The three sets are probably progressive both in

contents and models. All three include a 1.5-6v Motor and an instructional CD. The **Intermediário** has a small Crane on the lid and among the 6 models is an Audible Alarm with touch sensor. An LED Circuit and Pressure Switch are also mentioned. The **Avançado** has 440 parts for 12 models and I suppose the model on the lid is a simple Drilling Rig. Extra parts over the Intermediário are a second LED Circuit, a Relay Circuit, and a Light Sensor – one of the models in a Vehicle 'driven by light'. Another is an Electromagnet, and Series and Parallel Circuits are mentioned. The model on the



Fig.9

Inteligência is the Car in Fig.3 and the Set has 462 parts for 17 models. The parts include a Magnetic Sensor, another Light Sensor, and another Relay Circuit. The models include a Telegraph for learning Morse, and 'a Robot with sensors to track light'. Finally a larger set called **Laboratório de Microcontrolado** but it is 'Not Available' and no details are given.

• Next are **two Kit Robo**, Robot RS1 & RS5, for Vehicles controlled by light sensors. • **RS 1** makes a Trike driven by a 1.5-12v Geared Motor which runs when the light from a torch shines onto a Light Sensor. • **RS5** has 2 Motors with Gear-box for a larger 3-Wheeler (Fig.10) and there is a video on the web site showing it following a circuit of a wavy black line on a white ground. It is said that both Kits could be used with a microcontroller and both come with an instructional CD.

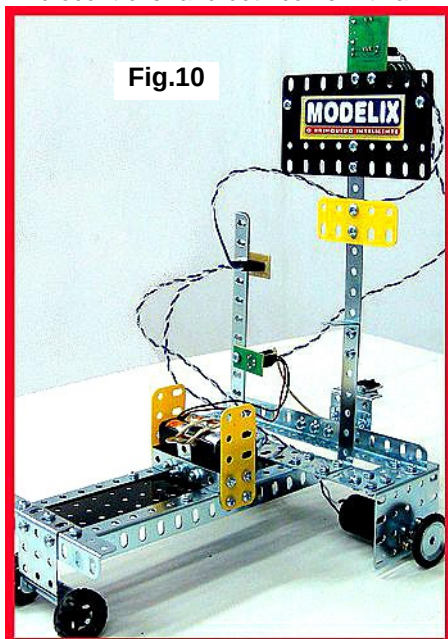


Fig.10

• Finally **two outfits intended for schools**, Combo 6.4 & 7.4. Each includes 4 Robo Lab 6.4 & 7.4 sets respectively (basic structural parts, sensors, etc), plus Geared Motors, and the means to control the models. Again the instructions are on a CD.

• **Combo 6.4**. The parts in each Robo Lab 4 include Strips, Plates, Brackets, Pulleys, 150 N&B, a 1.5-6v Motor, and all the Sensors & Connectors in the

Robótica Inteligência outfit. The other parts are 4x 1.5-12v Geared Motors and a 3 channel Radio Control Transmitter, & Receiver MC21. The main models shown for Combo 6.4 are those on the lids of the 3 larger Robótica sets and no doubt the difference is that their switching is radio controlled rather than manual.

• **Combo 7.4** contains all of Combo 6.4 plus 4 more Geared Motors, an Arquimedes II set, a V5 Kit of parts (see later), and an MC2.5 Microcontroller. The latter is USB connected to a computer and the software supplied allows the models to be programmed.

ADD-ON SETS • **Robótica Mini Kit Polias** in a box with Pulleys, Brackets, etc on its Fig.8 style label. • **Robótica Mini Kit Motorização** in a box with a bracket mounted 1.5-6v Motor, Battery Box, Pulleys, Brackets, etc on the label, again in the Fig.8 style. • **Mecanix I**, in a black Mini type box with a 2 Pulley drive on the lid, one with a Handle Crank on its Axle. • **Electrix I & II**, both in black Mini boxes with mauve labels showing respectively: a bracket mounted 1.5-3v Motor with a 2 Pulley drive; and a Battery Box, a few parts, and bracket mounted electrical parts including a Lamp or LED.

EXTRA PARTS • **Structural parts:** • **Kit V3 de Plataformas** (2 each of the 1mm thick, epoxied Plates in Fig.11). • **Kit Estrutura V5** with a 5*15h Plate from Fig.11 plus Flanged Plates made from the 2 largest V3 Plates (one of Fig.12C and 2 each of the Fig.12A & 12B parts). • **Kit de Conectores** (some N&B plus a selection of Brackets and 3 & 5h Angle & Flat Girders).

• **Motors** 1.5-6v medium speed, 1.5-6v high speed, and 3-

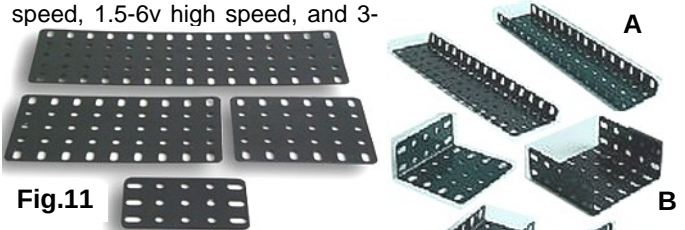


Fig.11

6v 780P, all cylindrical. 3-12v Crouzet type Geared Motors DCM42, DCM32, DCM62. All but the 1.5-6v are mounted on brackets made from the V3 parts.

• **Sensors & Components** Many of these are available as separate items, as per the web site. One is a programmable Microcontrolador Smart Tec which isn't included in any of the sets described, but perhaps it was in the 'Not Available' Laboratório de Microcontrolado outfit.

• **Caixas Plásticas** 2 sizes of empty black boxes with a MODELIX label on their transparent lids.

COMMENTS Most of the 'conventional' sets are unremarkable but the large Eiffel Tower looks the part & the Chess Pieces are a nice addition – plenty of play value. The smaller 'Entertainment' Robotic sets seem to be about elementary mechanics & electrics, and though they could provide useful, and perhaps necessary, background, they might be a disappointment to a youngster. The 'serious' outfits probably start with the RS5, and the two 'schools' sets clearly have potential. Edmundo wrote of them that although their components & spare parts are expensive and rather crude looking, such sets show how the metal construction toy should evolve in the future, and that Modelix are to be commended on their programme to introduce robotics into schools. My only reservation is that interest in the subject needs to be sustained with more ambitious projects and I'm nor sure this is taken seriously enough by either schools or manufacturers.

POSTSCRIPT: The **Inteligência Set** Edmundo wrote the following of the set he had acquired. The structural parts are shown in Fig.13 (though a magnifying glass may be needed to see the detail) and in addition the Set includes 1 each of the Flanged Plates marked A-C in Fig.12 (their sizes are wrongly described on the box lid). These parts are indeed somewhat

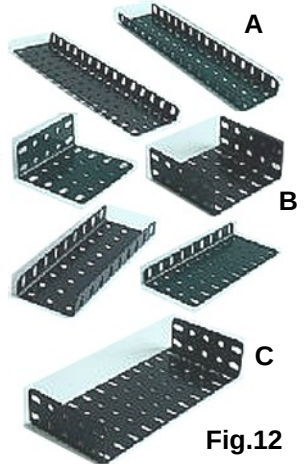


Fig.12

BUZ News with thanks to Jack Little for several of the items.

Early No.1 Sets First, two identical sets seen on Ebay. The parts are in an envelope within a box, and both are shown above. The small parts are in 2 small packets labelled

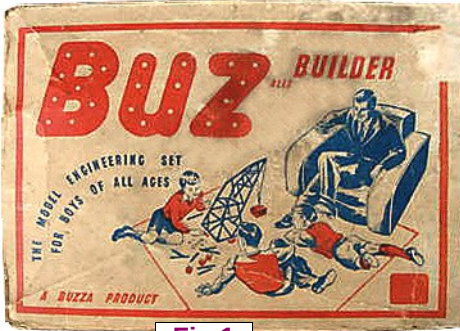


Fig.1 'Accessories Set No.1'. The parts are the same as in the No.1 below except that none are painted and all look to be nickelled. One of the sets contained a manual with a cover design like the lid label of the set below, and a leaflet in the other advertised the BUZ BUILDER CLUB.

Below one of Jack's sets which may have followed the 'nickel' No.1's, and has the same number of parts. (the white square at bottom right on the lid has 'Set No. 1 contains 80 parts' in it). The parts that can be seen match those given on



Fig.2

3*11, 5*5, & 5*11h and only the 3*11h has a centre hole. The only slotted holes are at the ends of the 5*11h size. From the same seller 3 sizes, 3*5, 3*11, & 5*5h, of BUZ Flexible Plates said to be made of 'grey fibre with a red coating'. They have no centre or slotted holes. The photos show some of each size red and some blue-grey. Were these were the original BUZ Flexible Plates?

BUZ Motors Most common by far is the 4-8 volt Motor with metal sideplates as illustrated in 19/541. But one example seen on Ebay had sideplates made of light brown 'thick cardboard' – perhaps fibreboard would be a more felicitous description. It was in a No.9 set in a wooden box, with, probably, 2 layers of parts. The lid was missing but the manual cover was as Fig.3.

Jack sent photos of two earlier types of motor, see Figs.4 & 6 below. As can be seen some standard parts are used in both of them. In Fig.4 the small words on the box are 'A BUZZA PRODUCT | Made in Australia | 4-8 Volt | DRY or WET BATTERY| AC – DC'. The box



Fig.3

p3/4 of MCS/NZ (when the parts were lettered rather than numbered) and correspond to the contents of Sets 0 & 1 in the later No.9 manual described in 19/541. Later still, by the time of the manual shown top left on 19/542, a 5*5h Flanged Plate had been added to the No.1.

The most noticeable difference between the parts in the present set and later ones is that the Strips are blue instead of green, and the 4x 1" Pulleys are brass. The only bright parts are the Hook & Span'driver. The box for the small parts, Axles, A/Bs, etc is missing but may have been white with red lettering. The Set Contents gives 18 N&B for the No.1 and they seem to have been used to hold the parts to the backing card.

A No.5 with blue Strips & A/Gs, said to date from 1956, was sold on Ebay several years ago. It had a similar lid label to the one in Fig.3 and a 20 page manual with a matching cover. Of the few other parts visible the 5*5h Flanged Plates, 2" Pulleys (with black Tyres), & Flat Trunnions were red; and a 1*5*1 DAS, a 1" Pulley, & a jumble of small parts had a bright finish. A sheet about joining the Buz Club was with the Set.

Flexible Plates Two other Ebay offerings are worth mentioning. One shows 4 red plastic Flexible Plates, perhaps those from the 1960s mentioned in 19/541. They are 3*5,

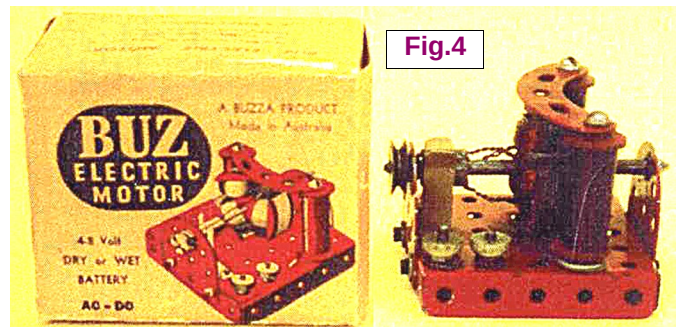


Fig.4

shows a formed 'bridge' across the top of the coils but it is replaced by a Curved Strip in the actual Motor. Two such Motors were used in the model shown in 19/541. The rather battered Motor below was offered on Ebay and has the formed strip between the coils. Also the shaft runs in ordinary rather than Flat Trunnions, and the base is noticeably different with 4*3 holes at a pitch of 1" in the flanges (the left end hole at the front has been squashed and bent under). In side views the brushes look similar to the TRIX pattern and so may possibly have been replacements.

The final Motor, right, has a coil across the top between the formed side pieces, & the base looks as if it might be moulded plastic.

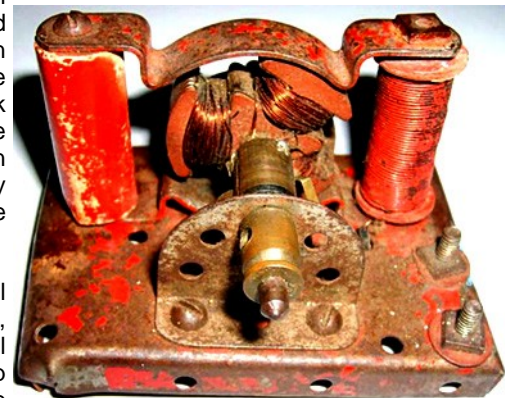


Fig.5

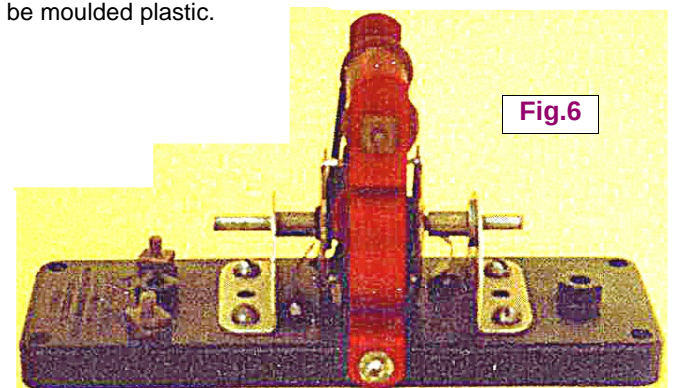


Fig.6

A Nr.48 STATO-BAU SET Kindly lent by Richard Gilbert, this set was one of those mentioned in 35/1060 & 37/1121. Nearly all of the major parts are present, as is the manual, but most of the Brackets & circular parts are missing. The manual covers only Sets 47, 47a, & 48, with no mention of any others, so the outfit may be an early one.

The Parts Fig.1 is the Illustrated Parts page from the manual at 80% full-size. As can be seen many of the parts listed in OSN 37 are not present. All the parts found in the Set are nickel plated. **Holes** are 3.4mm Ø with a few 3.5mm, at 10.0mm pitch. The **thread** is M3. Some notes on the parts with a few dimensions follow.

- The **Strip parts** are 10.0 to 10.1mm wide, with a few up to 10.2mm. All holes in #1,2,3,5d are round. Those in #1 are at 11.8mm pitch and the part is used to join 2 U-Girders alongside one another without a gap & without the ends of the Strip showing outside the Girders. One main application is to join the centres of the Curved & 310mm U-Girders neatly in some Bridge models. • The **A/B** is typically 11¼*15½mm. • The **DAS** are made from the appropriate Strips. • The **U-Girders** are 12.2mm wide and typically 6¾mm deep. • The flanges of the **A/G** & **Curved A/G** match the U-Girders. Neither has any holes in their narrower flange. • The **Wheel Disc** is only .6mm thick. • The 50mm Screwed Rod has a short, unthreaded, 2.7mm Ø, centre section. • **N&B** The **Bolt** head is 5.4mm Ø and the shank is 8mm long. The **Nut** is 6.1mm A/F and 2.3mm thick. • **Parts not seen:** 3b,5d,25,30.

The Sets The contents of the 47, 47a, & 48 sets as listed in the Manual are identical to those in OSN 37 except that none of the Sets contains a Screwdriver. But there was one mistake in OSN 37, the number of 6mm Bolts, #32a, in the Nr.48 should have been 80 and not 89. 3 of the parts listed in the Manual, #3b, 3c, & 5d, are not included in any of the sets.

The Nr.48 box is dark purple and measures 39*24*2cm – its partitioning though is like the Nr.47 in OSN 35, except that the narrow compartment on the left is not divided into three. The lid label is as in OSN 35: the bridge is made of STATO BAU parts, and the boy is sitting at a drawing board lit by a lamp. The set number is in the top right corner and STATO BAU is in tiny letters above the bridge logo at bottom right.

The parts not in the narrow side compartments are attached to a purple board in the main centre section, probably with brass bifurcated paper clips. The small parts are in two of the round cardboard boxes as in OSN 35, 6½cm Ø with light blue tops.

The Manual It has 16 pages, 220*159mm, including covers, and numbered 1-13 starting from C2.

The cover is as in OSN 35, and has STATO BAU above the logo in the bottom left corner, as on the lid. pp1-2 have an introduction which talks of nickelled parts, the need to oil them from time to time, and to protect them from damp. There is no mention of the coloured parts which were an alternative finish to nickel in the brochure described in 35/1060. p3 shows 10

Bezeichnung u. Abbildung der STATO-BAU-Einzelteile

<p>Flachstange Nr. 1 22 mm Nr. 2 25 mm</p>		<p>Flachstange Nr. 3b 30 mm Nr. 4 40 mm Nr. 7 70 mm</p>			<p>Flachstange Nr. 5 50 mm</p>		<p>Flachstange Nr. 9 80 mm</p>	
<p>Flachstange Nr. 3 30 mm Nr. 5d 50 mm</p>		<p>Flachstange Nr. 8 75 mm Nr. 11 400 mm Nr. 12 130 mm</p>			<p>Flachstange Nr. 6 60 mm</p>		<p>Flachstange Nr. 10 90 mm</p>	
Im System nur Rundloch		Im System Rundloch-Longloch usw.						
Nr. 2a	Nr. 3a	Nr. 3c	Nr. 5a	Nr. 5b	Nr. 5c	Nr. 10b	Nr. 11a	
Verbindungs-winkel	Doppel-winkel	Z-Winkel	Doppel-winkel	Lagerbock	Verbindungs-winkel	Verbindungswinkel	Verbindungswinkel	
<p>U-Eisen Nr. 10a 90 mm Nr. 12a 130 mm Nr. 14a 310 mm</p>			<p>X-Eisen Nr. 11b – 100 mm X-Eisen als Bogen Nr. 15a gestreckte Länge 360 mm</p>			Nr. 26	Nr. 25	
						Lochscheibe 30 mm Durchmesser	Schnurrad 23,5 mm Durchmesser	
<p>Gewindestangen Nr. 20 90 mm Nr. 21 50 mm Nr. 22 20 mm</p>			<p>Schraube Nr. 32 8 mm Nr. 32a 5 mm</p>		<p>Nr. 33 Mutter</p>		<p>Nr. 30 Schraubenschlüssel</p>	

Fig.1

basic constructions, and p4 the Illustrated Parts. The 6 models for Set 47 are on pages 5 & 8-10, from Signal to Gelenk+trägerbrücke (Cantilever Beam Bridge). One, the Bahnhofshalle, was shown in 37/1122. pp6-7 have 6 models for Nr.47a, from Windmühle to Eisenbahnkran. (The Windmühle is the model in 37/1122 but the parts list given there was wrong and should have been: 1x #2,3a,5a,20,21,22; 2x #5b,5c,7,10b,12,12a,25; 4x #6,11.) The remaining 3 models on pp11-13 are for Set 48, or 47+47a, from Eisenbahnstellwerk (Signal Box) to the Straßenbahn in Fig.2 (¾ full-size). The latter is the only large model which isn't basically a large framework. C3 has the Set Contents and C4 the logo, the name & address of the maker, & the printer: Druck: Richard Schumann, Bünde I, W.

Benötigte Teile

Teil-Nr.	Anzahl
2	11
2a	10
3	4
3a	2
4	12
5	10
5a	2
5b	2
5c	1
6	11
7	6
8	8
9	2
10	4
10a	4
10b	2
11	4
11a	4
11b	4
12	6
12a	6
14a	2
20	3
21	1
22	2
25	4
26	1

Schrauben und Muttern

Fig.2

Straßenbahn

Snippet: Another STATO-BAU Manual This Ebay item adds a little more information on the later parts and models. 26 pages 21.3*14.8cm were claimed and the front cover is as before. The first introductory page and the back cover are like those in the Nr.48 manual on the previous page, and the Set Contents page is identical to the one in the OSN 37 manual.

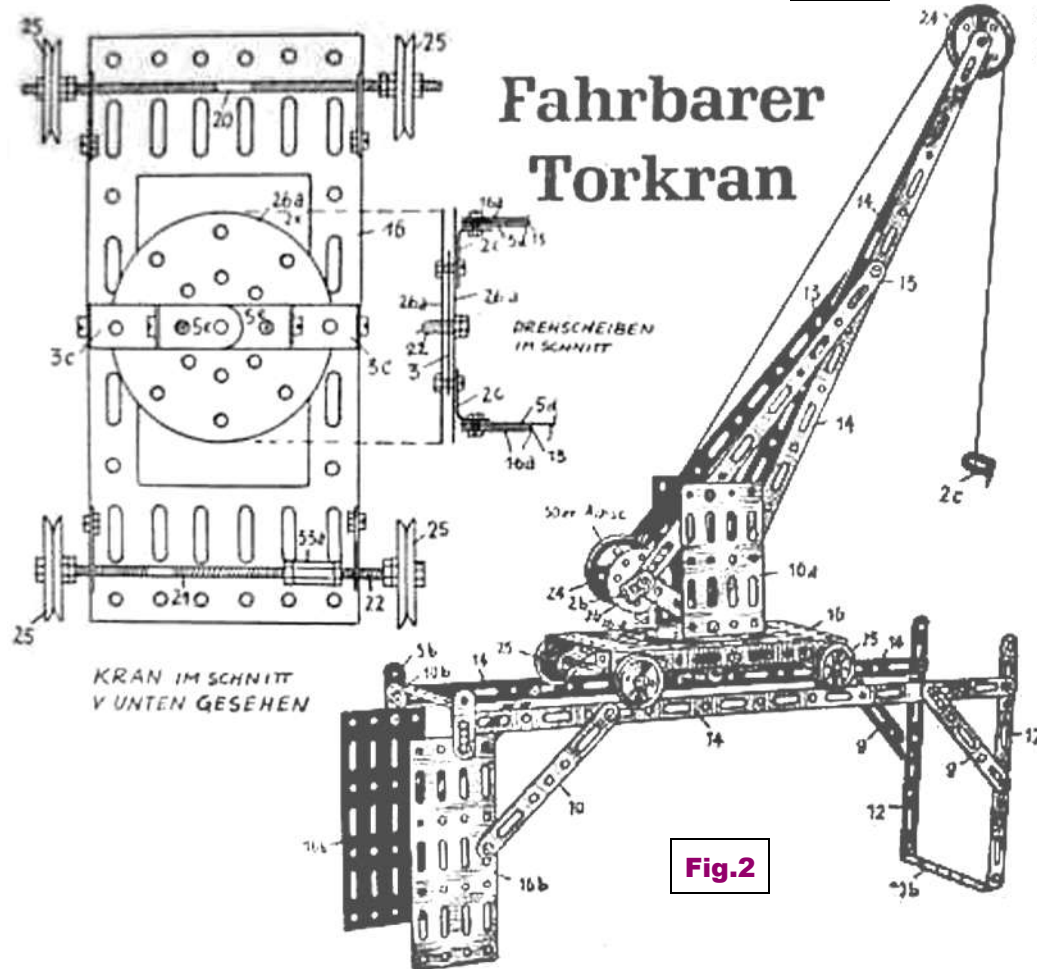
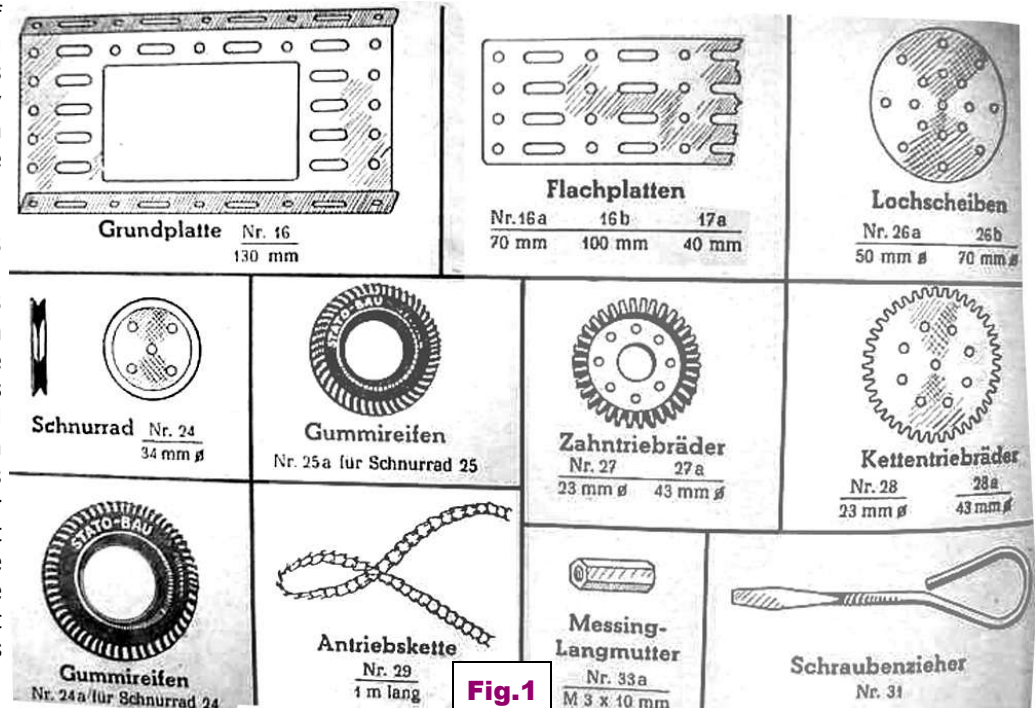
The parts in Fig.1 are from another page. None of them have been illustrated in OSN before but apart from that there are two points of special interest.

First, the diameters of the Gears, not certain in OSN 37, are given as 23 & 43mm. The one shown has 35 teeth and presumably it is the larger of the two, although assuming the pcd of the face holes is 20mm, the o.d. scales at only about 35mm. But if the 43mm & 35 teeth are correct the Modulus would be about 1.2. And by scaling the diameters, the 23mm Gear would have 18 or 19 teeth.

Secondly, 2 Sprockets, #28 & 28a, again 23 and 43mm diameter, are included. The drawing of the Sprocket scales correctly to the 43mm size and is shown with 41 teeth. Then the 23mm would have 22. As mentioned in OSN 37 neither Sprocket is included in the Set Contents even though the Sprocket Chain is, and with the difference in the apparent pitch of the teeth in the Gears & Sprockets, the possibility,

mooted in OSN 37, of the Chain running on the Gears seems unlikely.

Of the 2 model pages shown one with 3 small models is the same as in both the Nr.48 & OSN 37 manuals. The second page shows the model in Fig.2 below, at about the original size. The Plates 16, 16a & 16b are used in it, as well as the the Pulley #24, the Coupling #33, and the Discs #26 & 26a. It is marked as being for Set 48a or 49, another example of a model which can be made from a linking set. It could clearly be improved if the extra parts available in the No.49.



Benötigte Teile

Teil-Nr.	Stück
2b	4
2c	4
3	1
3b	2
3c	2
5d	2
5e	2
9	2
10	2
10b	2
12	2
13	2
14	4
16	1
16a	2
16b	2
20	1
21	2
22	2
24	2
25	4
26	1
26a	2
33	1

Schrauben und Muttern dünne Kordel

'New' System: MÄDLER'S METALL-BAU-KUNST

by Jacques Pitrat

The maker of this German system was William Mädler, Dorfstrasse 37, Chemnitz. The name of the system (written in the manual as 'Mädler's-Metall-BauKunst') can be translated as 'the art of the metal construction by Mädler'. My comments are based on a No.23 set, a No.25 set, a manual, and photos of a No.22 from Ebay. There is no mention of date anywhere but from the parts, and from the picture on the lid (right), I would guess that it was made at the beginning of the 1920's: the parts do not look like wartime parts, and the biplane in the picture looks like those of this period. [A stain over some of the sky in the picture has been 'removed' but the colours there, and their boundaries, may not be quite accurate – Ed]

The SETS This system began with three basic sets: 21, 22, & 23, and two conversion sets 22a & 23a. A No.24 Gear Set, which could be used with any of the three preceding sets, and No.25, the largest outfit, were added later. Set 25 has the new Gears that were included in Set 24, and also many more Strips, Plates & Wheels than Set 23. The pages of the manual for Set 25 are missing, so I do not know if there was a conversion set to convert Set 23 into Set 25, with or without the contents of Set 24.

Set 25 is in a 495*325*90mm wooden box. The Fig.1 picture is glued to the top of its sliding lid, and two sheets are glued to the underside. One of them is printed and has drawings of the parts included in Sets 21-23, plus columns for the contents of each of these sets. But the quantities are printed only for Set 21, and the owner of the set has overwritten 25 on the 23 at the top of the third column, and put the contents of Set 25 in this column. The second sheet is typed, most likely by the maker but possibly by the owner. It lists the contents of Set 25, including the new parts which appeared in Set 24.

There are 12 compartments in the bottom of the box, a large tray sits over them fitted with 66 pegs for wheels, etc, and a small 300*210mm tray on top has 10 compartments. There are wooden dividers between the compartments.

Set 23 is in a 375*270*145mm wooden box and has a hinged lid with a lock. The bottom has 14 compartments, a large tray has 6 with the largest fitted with 21 pegs, and a small 340*140mm tray has only 13 pegs. Contrary to the No.25 box, the names of the parts which go into each

Fig.2

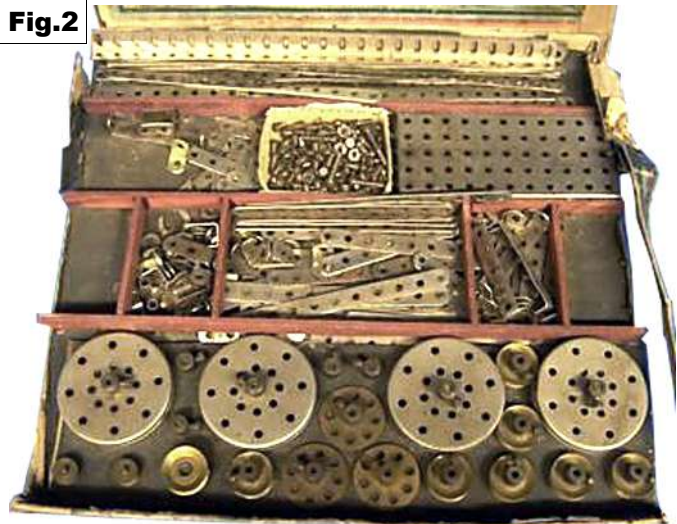


Fig.1

names and gives the contents of Sets 21 & 25. Where 2 quantities are given for Set 25 the first is from the written '23' column, and the second from the typed sheet.

The PARTS Fig.3, taken from the Illustrated Parts on the lid, shows the parts in Set 23, while all the new parts in Set 25, except the DAS, are shown in Fig.4, as well as all the other 'circular' items.

The Strips, Girders, Brackets, Nuts, and the Märklin-like Pulleys are nickelled in Sets 22 & 23, while they are blackened in Set 25; apart from this difference, these parts are identical. I do not know if the buyer could choose between nickelled or

compartments are printed on the wooden dividers. However although the trays and the bottom of the box seem to be original the rest of the box is suspect. First, because it is much higher than it need be and secondly because the lid appears never to have had a label stuck on it.

Set 22 was in a single layer cardboard box with, apart from the Set No., the same picture as the No.25 on the lid. The open box is shown in Fig.2.

Set Contents Fig.5 lists the parts with my English

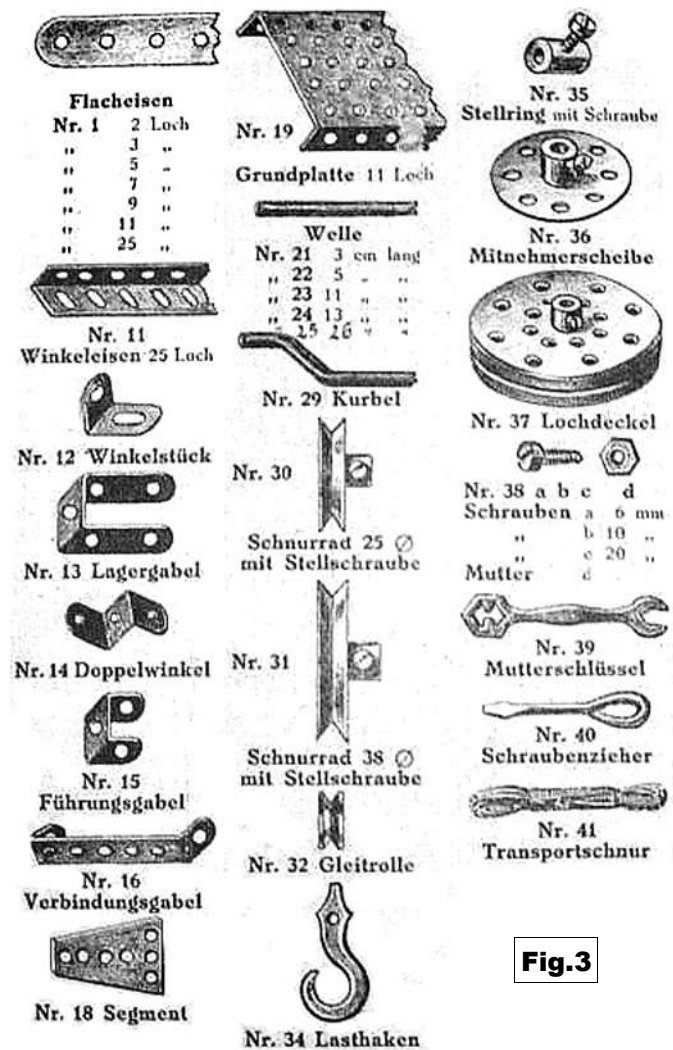
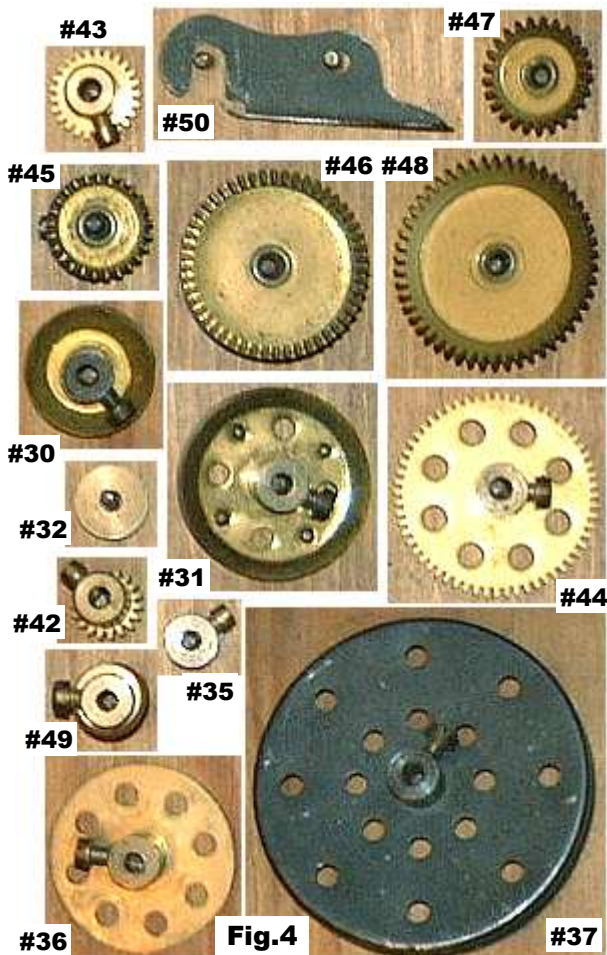


Fig.3

Alleiniger Hersteller **William Mädler**
Chemnitz, Dorfstraße 37.



Part #, Name /Set #	21	22	23	25
1 Strip 2h	8			32
2 Strip 3h	2		20, 29	
3 Strip 5h	10		50, 60	
4 Strip 7h			16	
5 Strip 9h			24	
6 Strip 11h	7		50, 59	
7 Strip 25h	4		34	
11 A/G 25h			14, 16	
12 A/B	12		52	
13 D/B, 2h high	1		10	
14 Rev. A/B	2		14	
15 D/B	1		6	
16 DAS 1*5*1h	4		14	
18 Triang. Plate	2		14	
19 Flgd Plate 5*11h	1		6	
21 Axle 3cm			0	
22 Axle 5cm	2		8	
23 Axle 11cm	3		16	
24 Axle 13cm			6	
25 Axle 26cm			2	
29 Crank Handle	1		4, 3	
30 Pulley 25mm	6		16	
31 Pulley 38mm			8	
32 Loose Pulley	2		4	
34 Hook	1		5	
35 Collar	2		12	
36 Bush Wheel	1		6	
37 Flanged Disc Pulley	2		6	
38a Bolt 6mm	38		220	
38b Bolt 10mm	4		100	
38c Bolt 20mm	10		20	
38d Nut	54		310	
39 Spanner	2		4	
40 Screwdriver	1		2	
41 Hank of Cord	1		3	
42 Pinion 19t			3	
43 Pinion 25t			1	
44 Gear Wheel 60t			2	
45 Contrate 25t			1	
46 Contrate 50t			1	
47 Bevel 25t			1	
48 Bevel 50t			1	
49 Worm			2	
50 Pawl			1	
51 DAS 2*5*2h			1	

Fig.5

#48 Brass **Bevel Gear** with a steel boss, 50 teeth, Ø 41mm. No face holes. The Contrate & Bevel Gears look very much alike if you are not near them.

#49 Brass **Worm**, 10 threads, length 25 mm.

#50 Blackened steel **Pawl**, which looks like the first Meccano pattern.

51 Blackened steel 2*5*2h **DAS**.

The MANUAL comprises 8 pale green 250*220 cardboard sheets covering Sets 21 to 24, and printed in Roman, not Gothic script. Each is perforated so they could be kept in a file cover. A list of the parts necessary for building each model is given. Except for Set 24, there are no comments, but for some models small figures show important sub-mechanisms. Pages 1 to 5 describe 24 models for Set 21, pages 6 to 10 have 16 models for Set 22, and pages 11 to 15 have 10 models for Set 23. Overleaf are two of the No.23 models, at about the original size, and in Fig.7 one of the more interesting No.21 models,

blackened parts, or if the maker changed the finish at some point. In the second case, this implies that this system lasted for several years; furthermore, as Set 25 was produced after Set 23 (since it contains new parts which were not in the initial content list) the nickelled parts would have been made before the blackened ones.

The diameter of the **holes** is 4.0mm, and their pitch 12.5mm. The **thread** is 4mm diameter but does not quite fit M4 or 5/32" BSW parts. **Bosses** and the Collar are 10mm Ø and are single-tapped with the same thread as the N&B. From the dimensions given for the **spur gears** they are Mod. .63 (40.3 DP).

A list of the parts follows with notes as necessary to supplement Figs.3 & 4.

#1-7 2,3,5,7,9,11,25h **Strips**. They are 12mm wide with ends which vary a little but are mostly nearly fully rounded with only about 2mm of metal outside the end hole. Unlike Meccano's Fishplate, both holes of the 2h Strip are round.

#11 25h **Angle Girder** with square ends.

#12 **Angle Bracket**.

#13 **Double Bracket**, 2 holes high.

#14 **Reverse Angle Bracket**, no elongated hole.

#15 **Double Bracket**, like the current M11.

#16 1*5*1h **Double Angle Strip**.

#18 **Triangular Plate**.

#19 11x5h **Flanged Plate**.

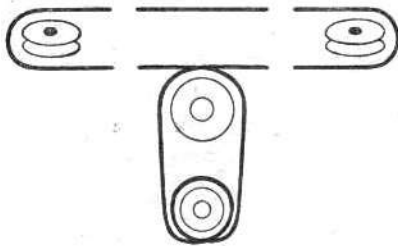
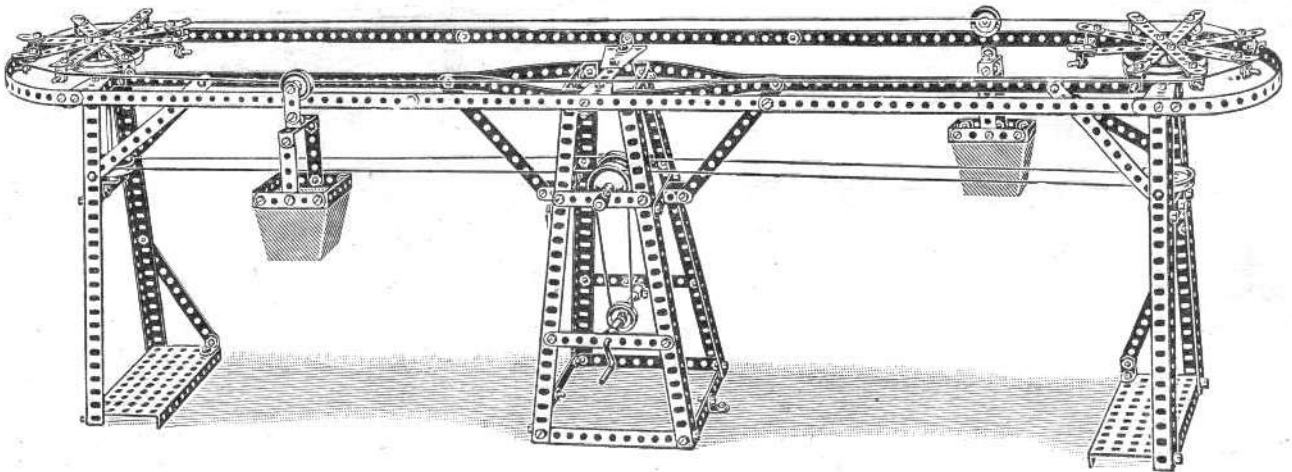
#21-25 3,8.5,11,13,26cm **Axles**. The 3cm is never used in the models. The 26cm was in the typed, but not the printed list of parts. Both sets are 90% complete, but all the axles are missing except the 26cm ones. Their diameter is 4.0 mm.

#29 **Crank Handle**, missing in both sets.

#30 25 mm brass **Pulley** with a steel boss.

#31 38mm brass **Pulley** with a steel boss and four face holes.

#32 14mm brass **Pulley** without boss.



№ 49 Schwebbahn

14 Flacheisen	2 Loch	30 Winkelstücke
4 " "	3 " "	2 Wellen 13 cm
10 " "	5 " "	1 " " 11 cm
6 " "	7 " "	1 Kurbel
2 " "	9 " "	3 Schnurrädern 25 Ø
20 " "	11 " "	4 " " 38 Ø
12 " "	25 " "	
8 Winkeleisen	25 Loch	

besteht aus:

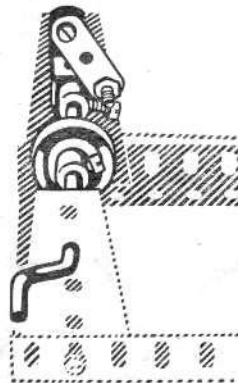
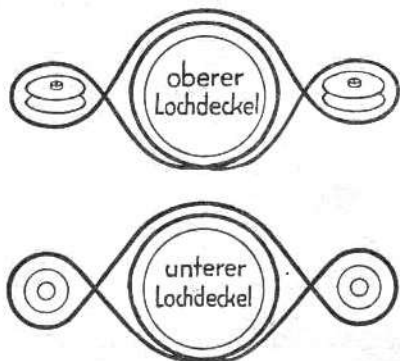
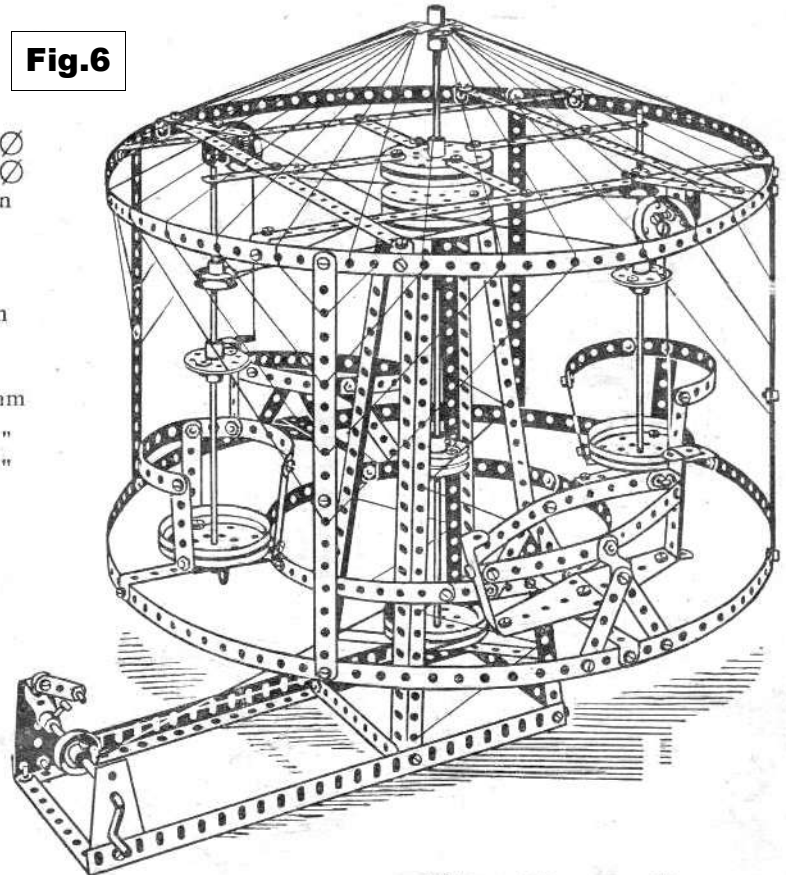
2 Mitnehmerscheiben	6 Segmenten
2 Lagergabeln	2 Lochdeckel
1 Doppelwinkel	127 Schrauben 6 mm
2 Grundplatten	22 " 10 mm
4 Stellringen	4 " 20 mm
11 Verbindungsgabeln	157 Muttern

№ 50 Karussell

besteht aus:

14 Flacheisen	2 Loch	1 Kurbel
5 " "	3 " "	3 Schnurrädern 25 Ø
22 " "	5 " "	4 " " 38 Ø
6 " "	7 " "	4 Mitnehmerscheiben
3 " "	9 " "	2 Lagergabeln
20 " "	11 " "	6 Doppelwinkeln
12 " "	25 " "	4 Stellringen
2 Winkeleisen	25 Loch	10 Verbindungsgabeln
4 Führungsgabeln		6 Segmenten
24 Winkelstücke		6 Lochdeckeln
1 Welle 26 cm		138 Schrauben 6 mm
3 " 13 "		8 " 10 "
2 " 11 "		5 " 20 "
		155 Muttern

Fig.6



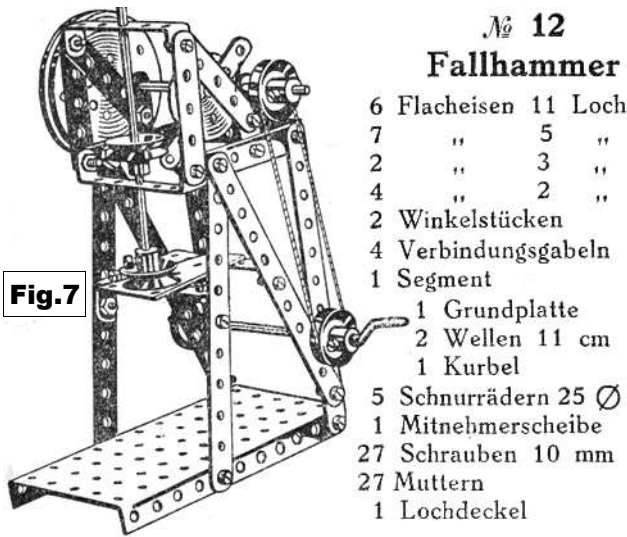
№ 50 Karussell

reduced to 75%.

Page 16 shows the use of Pulley Blocks, and 6 mechanisms for Set 24 with Sets 21-23. Two of these are shown in Figs.8 & 9, and the 2h high DAS is used in the latter. The Reversing Gear seems to have a Pinion between two large Contrates. As there is only one such Contrate in Set 25, either there were never more Gears in Set 24, or the second gear is the large Bevel, a

possibility because the picture only shows its back. But in that case this is certainly not an example of 'Metall-Bau-Kunst' as the Bevel will not mesh correctly with the Pinion.

The models make good use of the contents of the various sets. There is nothing for Set 25, so either these sheets are missing or they were never produced, this set being a late addition to the system.



**№ 12
Fallhammer**

- 6 Flacheisen 11 Loch
- 7 " 5 "
- 2 " 3 "
- 4 " 2 "
- 2 Winkelstücken
- 4 Verbindungsgabeln
- 1 Segment
- 1 Grundplatte
- 2 Wellen 11 cm
- 1 Kurbel
- 5 Schnurrädern 25 Ø
- 1 Mitnehmerscheibe
- 27 Schrauben 10 mm
- 27 Muttern
- 1 Lochdeckel

Fig.7

REMARKS MÄDLER'S sets could be compared with the 1921 MECCANO sets, they have almost the same number of different parts. If we count the number of Strips, including the Fishplates for MECCANO, Sets 5 & 6 had 125 & 256, while Set 25 had 176. Furthermore, Sets 5 & 6 had 9 & 16 Gears, while Set 25 had 12. Therefore, Set 25 could be placed in the middle between the 1921 MECCANO Sets 5 & 6.

MÄDLER parts were well made, and most of them are still in a very good condition, although a few have patches of rust.

**№ 8
Zahnradübersetzungen**
mit Zahnrädern von verschiedenem Durchmesser kann man schnellere oder langsamere Umdrehungen erzielen.

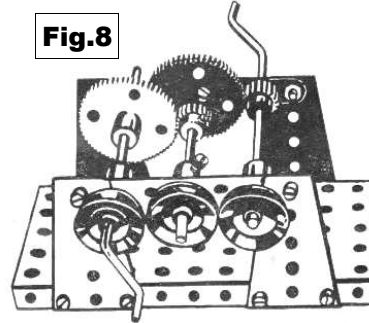


Fig.8

№ 9 Umsteuerungsgetriebe für Vor- und Rückwärtsgang

Durch Antrieb der kurzen Antriebswelle nach einer Drehrichtung, kann man an der durchgehenden Welle Rechts- u. Linksgang, je nach Umschaltung des Hebels, erzielen.

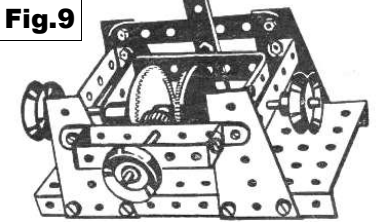


Fig.9

The Gears are at least as good as similar MECCANO or MÄRKLIN parts of the same period. Boxes are sturdy, with many compartments. This system owes much to MECCANO and to MÄRKLIN, though we cannot completely exclude that MÄRKLIN owes much to MÄDLER! This possibility cannot be ruled out as long as we do not know exactly when this system was made. It lasted long enough to have new parts and sets added to the initial ones, and, probably, to have the finish changed from nickel to black. It is curious that the sets of this good quality system are so rare, neither Baukästen, nor Eisenzeit even mention it.

MADLER'S: S4

OSN 40/1214

Snippets. 'New' Systems: DELTA & ERECTO The sets shown here, the DELTA No.1 (Fig.1) & No.2 (Fig.2), and the ERECTO No.2 (Fig.3), were sold on German Ebay by the same seller. It was said of them that some of the parts were brass. The box dimensions given were 38*20cm for the DELTA No.2 and 38*19cm for the ERECTO No.2. The lid of the DELTA No.2 is the same as the No.1 except that the No.1 label is replaced by a circular '2' label (as on the red small parts box in the Set). Similarly the manual cover has no No.1 label, and no No.2 label either, but perhaps it had fallen off. The wording on the ERECTO lid and manual cover is in English.

As well as the manual covers one page of models was shown for each Set. But it was the same page for each set and was from a STABIL manual, headed 'Modelle Nr.1-128 gebaut mit Walther's "STABIL" Baukästen Nr.49'.

It's hard to know what to make of the parts. The 5*11h Flanged Plate has a MÄRKLIN look to it, but the Flat Trunnion in Fig.2 looks like MECCANO. The Flanged Sector could be the early pattern from either. Not all the parts may be original of course but the flat 'brass' parts in Fig.1 may well be, and also the 5h Ø part (Flanged Disc Pulley or Wheel?).

If the STABIL manual page is from one or more of the manuals it is no doubt a pointer to these sets having been hastily put together in Germany very soon after WW2 using whatever was to hand. The DELTA sets could have been aimed at the German market while the English on the ERECTO lid & cover, and the name itself, may have been to tempt unwary Americans! The partitioning in the DELTA & ERECTO No.2 sets is formed using the same elements but arranged in a very slightly different way.

Fig.2



Fig.1



Fig.3



DELTA: S1. ERECTO [2]: S1

OSN 40/1214

AUTO-CONSTRUCTOR
AUTO-CONSTRUCTEUR
AUTO-KONSTRUKTOR

This is about 5 sets from this 1920s German system, all called AUTO-CONSTRUCTOR on their lids. 3 included a manual, one in German also called AUTO-CONSTRUCTOR, and 2 in Dutch called AUTO-CONSTRUCTEUR. All that was known in the past was that German boxes were called AUTO-CONSTRUCTOR, and that a manual in Dutch was called AUTO-CONSTRUCTEUR. It was thus assumed that Dutch sets would also be called AUTO-CONSTRUCTEUR, but it seems not. To confuse matters a little more one of the Dutch sets has an 'AUTO-KONSTRUKTOR Nr.1' label on its lid apron.

The 5 sets comprise one recently acquired Dutch Nr.1, near complete and with extra parts, and photos of the others. They are less complete, one Dutch, one German, and 2 without manuals – one of the latter is in Baukästen, p27, and one was offered from Germany on Ebay. Also photos of 2 smaller 'mystery' sets which have no lids, or manuals. My thanks to Chris Freeman & Karst Quast for the material they sent me.

HISTORY There is no indication of date or manufacturer in any of the material to hand, except that the AUTO-CONSTRUCTOR manual has the 'Philipp Kühner, Eisenach' logo right on its back cover. Nothing else is known of this firm.



Eisenzeit gives the start date as 1928 and the maker as Curt Schrader of Eisenach, then from 1929, of Munich. In 1927 Curt Schrader succeeded a firm called Stanzwerke, also at Eisenach, and it had, under various names, produced METALLO-TRIGON from 1913 to 1926. And that may be relevant to certain parts found in some of the sets considered here. There is a slight element of doubt over this Eisenzeit material though because 'CONSTRUCTOR' is spelt 'KONSTRUKTOR', and preceded by 'Der'.

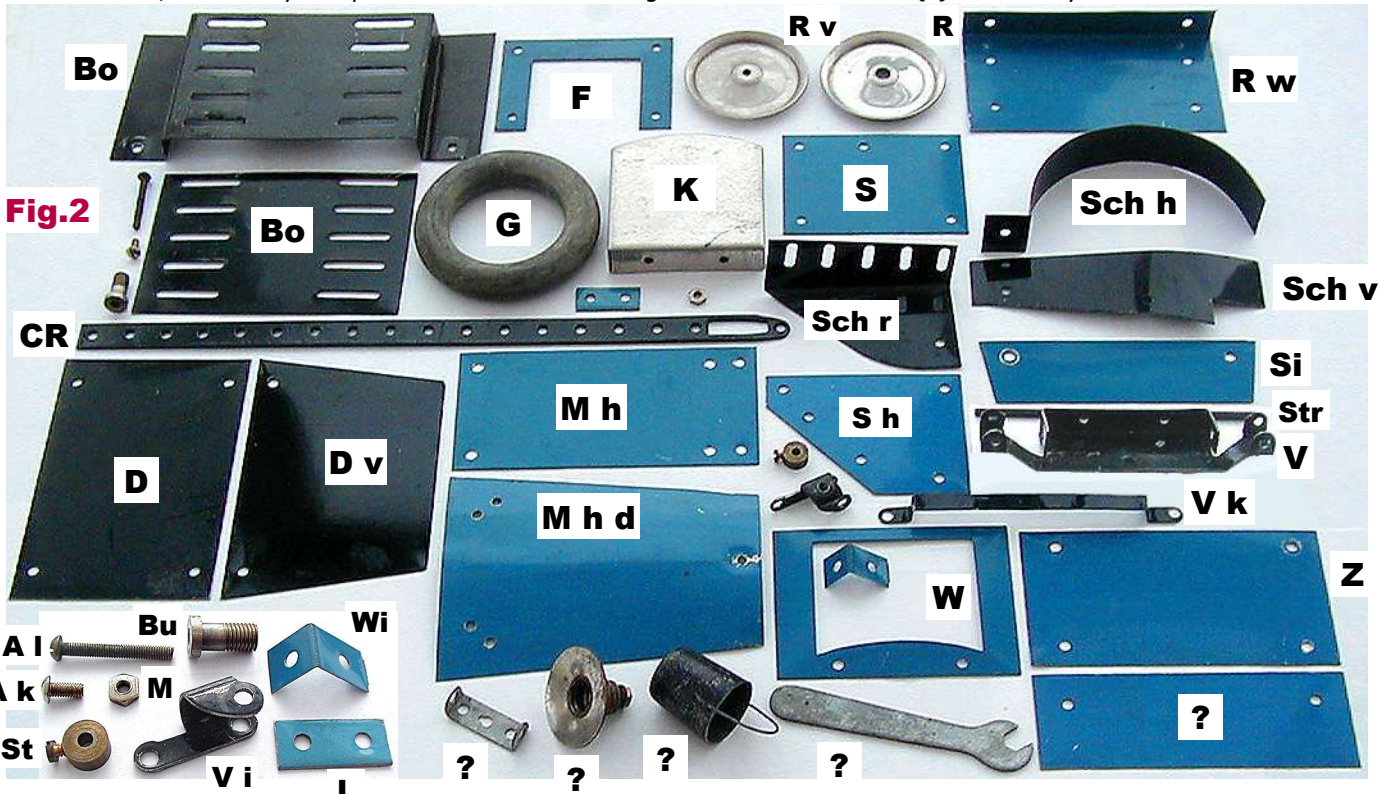
Baukästen also mentions a set called AUTOCONSTRUCTOR (no hyphen) made by Heinrich Fischer & Co. of Nürnberg, end date 1931/32, and the AUTO-CONSTRUCTOR set on p27 is in fact attributed to this firm, though perhaps wrongly.

The PARTS The different parts in the Set are shown in Fig.2 with the small parts at a larger scale in the bottom left corner. The actual blue is rather darker than in the photo. **Key dimensions** (overall) The Chassis Side Member #CR is 245mm long. The #Bo Floor Panel with Running Boards is 138mm wide o/a. The body side parts #F & #S are 47mm high

& 65mm wide. The Roof #D is 94mm wide & 65mm long. The Bonnet #M h d is 100mm long, and in width tapers from 74 to 55mm. The Tyre #G is 65mm o.d. & 13mm wide. The Wheel Discs #R & R v, are 46½mm Ø. **Holes** are 3.2mm Ø; their pitch varies. **Material/finishes.** All the parts are steel except the aluminium Radiator & Wheel Discs, & a few small brass parts as noted. Chassis & roof parts are painted black; other body parts blue, or in one German set, red.

There follows a list of all the known parts with their original PNs, but my names. The quantities shown in the Dutch manual are given in curly brackets and they allow the models shown for Set Nr.1 to be built. Models for Sets 'Nr.1 u. 2' need extra parts and those found in my Dutch set, above the Nr.1 quantities, are also given in the curly brackets, but in red.

- **A k Short Bolt**, nickelled, M3, 6½mm u/h, with 5.5mm Ø button (shallow round) head. {160, 38}
- **A l Long Bolt**, as A k but 23mm u/h. {4}
- **Bo Floor Panel with Running Boards.** {3, 1}
- **Bo Floor Panel.** {1}
- **Bu Bush** for front wheel. Nickelled brass, 13.8mm long o/a with 8.4mm Ø head, and 5.6mm Ø shank, with part of it threaded at .8mm pitch. No Nut to fit this thread has been seen. The bore is 3.5mm and is a loose fit on the Long Bolt, #A l, on which it runs (see Fig.10). {2}
- **CR Chassis Side Member:** the holes are at 13.0mm pitch. {4, 3} The 3 extra are only used for the ladder on the Fire Engine (Fig.6).
- **D Roof Panel.** {3, 1}
- **D v Front Roof Panel.** {1}
- **F Body Window Panel.** {6, 2}
- **G Tyre.** {4}
- **H Back Axle.** Not seen but probably about 140-145mm long and either 2.75mm Ø, like #Str, or larger to suit the 3.2mm bore of one of the Collars, #St. {1}
- **K Radiator.** It is bolted to the top of the Front Axle and has a pattern of fine, broken, diagonal lines engraved into the front face. {1}
- **L Flat Bracket**, typically 10.3*22.3mm with holes at 12 – 12¼mm pitch. {30, 55: of the 85, 77 blue, 8 black.}
- **M Nut**, hexagonal, pressed, M3, nickelled, 6.0mm A/F, 2mm thick. {170, 37}
- **M h Engine Bay Side Panel.** {2}
- **M h d Bonnet.** {1} It has only the 4 corner holes in the



Manual's Illustrated Parts.

- **R Front Wheel Disc.** 5.9mm Ø centre hole. {4}
- **R v Rear Wheel Disc.** As #R but 3.2mm centre hole. {4}
- **R w Rear Body Panel.** In Fig.2 the flange is at 90° but should be at 45° to fit around the left side of #S h. {1}
- **S Body Side Panel.** {8, 4} Only 10 would be needed for any of the Manual models, & 2 are a distinctly darker shade.
- **Sch h Rear Mudguard.** {2}
- **Sch r Valance for Front Mudguard,** handed. {1 pair}
- **Sch v Front Mudguard.** {2}
- **S h Side Rear Body Panel.** {2, 4}
- **Si Seat.** {6, of which 3 blue & 3 black}
- **St Collar,** brass, 8.5mm Ø, 4mm wide, single-tapped. The Set Screw is brass, threaded 2.5mm Ø x .6mm, with a 4.1mm Ø cheesehead, & is 3.8mm u/h. {8} 6 were found, 5 with a 2.8mm bore & one 3.2mm. Only 6 seem to be needed for the Manual models, 1 on either side of each back wheel, & the Steering Wheel. If the 3.2mm fits the missing Back Axle then there would have needed to be 3 more of that size. If not it's not clear what the 3.2 mm would be used for.
- **Str Steering Wheel & Column.** {1} The Column is a 2.75mm Ø rod, 92mm long. The Wheel was missing and is not shown in the Illustrated Parts – in the Manual models it looks like a Pulley and in a photo of what may be the actual part it has spokes.
- **V Front Axle.** {1}
- **V i Steering Arm,** handed. {1 pair}
- **V k Track Rod.** {1}
- **W Windscreen.** {1}
- **Wi A/B,** typically 16*12¼mm o/a, & 10.4mm wide. {45, 7}
- **Z Body Cross Panel.** {2, 5} Used at back, as internal partition, and seat back.
- **#? Narrow Body Cross Panel.** Used between the Rear Panels #S h. {1, but not listed in the Manual.}
- **#? Headlamp.** A 30mm slightly concave nickelled disc with a brass lamp holder peened to it. The connection is to a #A k N&B isolated by 2 fibre washers, one inside and one outside the end of the lamp holder. 2 are needed for each of the '1 & 2' models. {0, 2}
- **#? Bucket.** A one-piece black painted steel body (24mm deep and 22mm Ø at the top) with a wire handle. 4 are used in the Fire Engine. {0, 4}
- **#? DAS.** Identical to the METALLO TRIGON #7, see 5/92. 14 were in the Set and they could possibly be used as the rungs of the Fire Engine's (strange 3-stile) ladder, though 16 would be needed.
- **#? Spanner.** One was found, zinc plated and 1.8mm thick.
- **#? Screwdriver.** A wire Screwdriver seen in another set is about 7cm long with a very narrow handle. Both the Spanner & Screwdriver look like METALLO TRIGON parts.
- **#? Motor.** A small flat clockwork Motor is shown by the set in Baukästen (p27). It has a long shaft on either side but there is no indication of how the wheels would be held fast on them, and it's hard to see how the Motor could be incorporated in the models.

The SETS All the sets are in partitioned boxes, black on the outside and red inside. Ignoring the 2 small sets for the moment, all have the Fig.3 lid label. Small parts and N&B are in 4 red matchbox-style boxes, two 6½*6½*1¼cm, and two 6½*3*1¼cm.

Two sizes of box are known 37*27*3cm (including my Dutch set), and 41½*31*3cm. No set number can be seen on any of the boxes except the Nr.1 on my Dutch set's lid apron. And apart from my set none of the others include any of the parts unique to the Nr.2: the Bucket, Headlamp, and DAS (or some other part for the ladder rungs).

The non-Nr.1 models in the Manual are said to be 'Gebaut mit Nr.1 u. 2' - Built with Nr.1 & 2 – and to me this indicates that the Nr.2 was probably an add-on set with just the extra parts needed to make the Nr.2 models. However in the



German manual there is just a photo of each model with no mention of which set or sets are needed. So just possibly there was only one set at that time, and it had all the parts needed for all of the models. Another point in favour of this theory is that all the manual models are shown fitted with Headlights and in the Dutch manuals there is a note '(ohne Beleuchtung)' – 'without Headlights' – but in the German one this qualification is absent. One could imagine further that the larger boxes were for this original, larger set – but neither of the two seen included any of the 'Nr.2 parts, so I wouldn't put money on it.

Now the 2 small 'mystery' sets shown below.



The boxes are in the same style as the larger ones and they scale at very approximately 26*13 & 16*11cm. They were in a mixed lot which otherwise included some conventional parts & some Plates in several colours with centre cutouts – they had a cardboard look to them and could have been from an architectural system. Apart from the blue Panels, 4 shiny Buckets and a number of the DAS can be seen in the box on the left. Also just visible top right of the DAS the possible Steering Wheel – silvery with spokes, and a diameter of about the length of the DAS. This box would be large enough to accommodate all the extra parts needed for the 'Nr.1 u. 2 models, and so could be the Nr.2 outfit.

The righthand box has more Panels, a few A/Bs, and also some DAS which look like the 100mm long METALLO TRIGON part #9. If this size of DAS were part of an AUTO-CONSTRUCTOR set it can't be seen in any of the Manual models. The box isn't long enough to take the 3 extra Chassis Side Members needed for the Fire Engine and so if it is an



AUTO-CONSTRUCTOR set one can only think that it was another add-on outfit, hitherto unknown.

The MANUALS It will be best to consider the Dutch & German versions separately. Starting with the Dutch, it has 12 pages, including covers, 213*143mm, plus loose sheets with the Illustrated Parts and the models on them. p1 is shown in Fig.5, p2 is blank, p3 lists 7 models from the 2-Seater on the lid to the Fire Engine in Fig.6. There are 2 versions of Model 6, a Bus with and without seats on the roof – both are shown on the lid.

The building instructions start on p3 and continue through p9. p10 has a list of the parts and quantities for each, enough to make the Nr.1 models though this isn't said. pp11-12, the back covers, are blank.

The loose sheet showing the Illustrated Parts has no heading but the parts are again those needed for the Nr.1 models. Each of the other sheets has one photo of one of the models, with above it the German text already mentioned (despite this being a Dutch manual): 'Gebaut mit Auto-Constructor Nr.1' (or where appropriate 'Nr.1 u. Nr.2'), & '(ohne Beleuchtung)'. Presumably there was one sheet for each of the models listed on p3 but one, for Reiswagen (Touring Car?), is missing, and also the one for the Bus with Roof Seats if there was one for this variant.

The German manual is a photocopy. The front cover is the same apart from the name, and also the list of models. The instructions cover the same ground but extend to a few lines on p10, with an elaborate letter 'J' underneath, elongated downwards, another logo perhaps. The list of parts is on p11,

Gebaut mit Auto-Constructor Nr. 1 u. 2

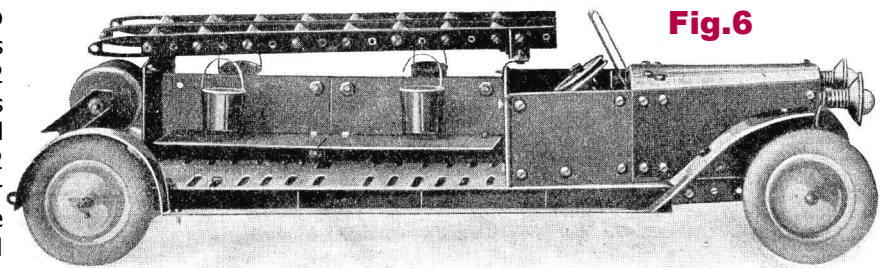


Fig.6

Gebaut mit Auto-Constructor Nr. 1

(ohne Beleuchtung)

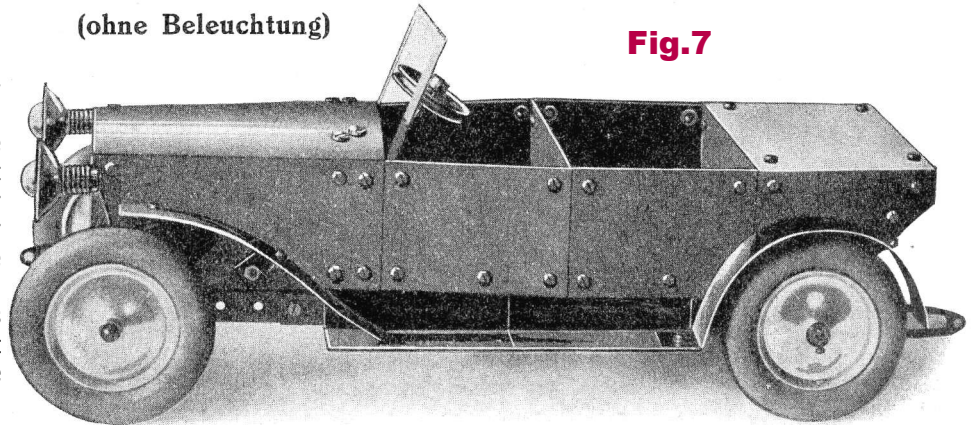


Fig.7

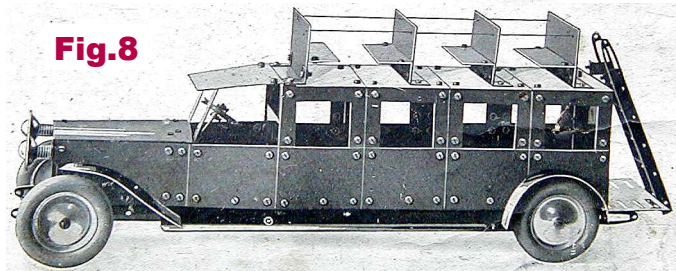


Fig.8

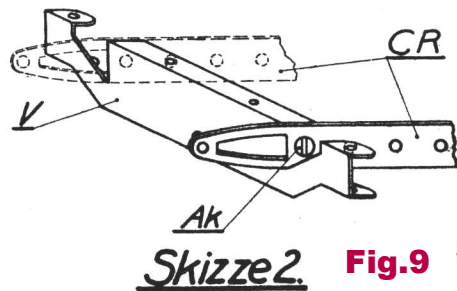
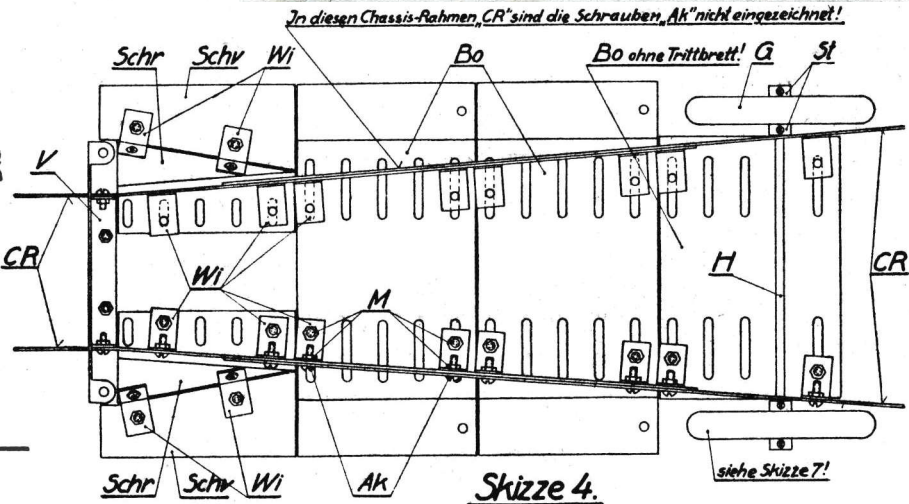
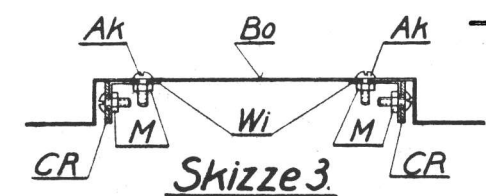


Fig.9



Chassis-Rahmen mit Vorderachse und Bodenblechen von unten gesehen.



Skizze 3

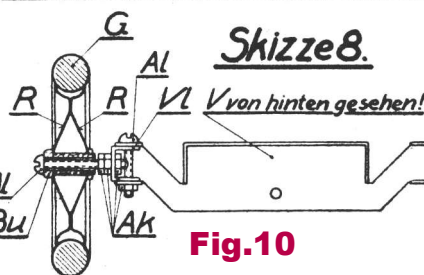


Fig.10

the inside back cover and the Fig.1 logo is on its outside. Of the loose sheets only 4 have survived, 3 with what are Nr.1 models in the Dutch manual, and one a Nr.1 u. Nr.2. All have a photo identical to the Dutch version, but as already noted, no text at all.

Of the manual models 3 can be seen on the lid label, and one on the manual cover (on the Model Sheet for this Nr.1 model it is still shown with the spare wheel, a part not in the Nr.1 set and in any case there isn't a suitable hole to which it could be

bolted). The other four are a shorter, 3 window version of the Bus, the missing Reiswagen, the Fire Engine in Fig.6, and the Open Tourer in Fig.7 (both at the original size). Fig.8 is an enlargement of the Bus with Roof Seats from the lid label. Parts that can be seen in the models, but not otherwise known, are the hose reel on the back of the Fire Engine, & the ladder on the back of the Bus – with stiles like shortened

Chassis Sides and the small, strange shaped, spike-ended pieces near the top.

The building instructions include 10 diagrams and 4 are shown in Figs.9 and 10 (the wording in the Dutch manual is again in German). To start with, 2 chassis side members are made by joining a pair of Chassis Side Members, #C R, for each side, overlapped to give the correct length, as given on p3 – from 27cm for the 2-Seater to 48cm for the Large Bus. Then these are joined by the Front Axle plus the Floor parts, and the back wheels added. The back wheels are simply the Tyre with a rear Wheel Disc on either side, squeezed together by a Collar on either side. The front wheel assembly is shown in Fig.10. It appears that there is narrow Nut on the end of the Bush #Bu, and one would be essential to allow the Discs to grip the Tyre and allow the whole assembly to rotate on the Bolt #Al. There seems no reason for the left Nut #Ak unless it simply acts as a spacer. Although the Steering Arm and front wheels could pivot on the Front Axle, the king pin Bolt has only one Nut on it and so presumably it is intended that the wheels are locked in position. And indeed there is no indication that the Steering Wheel/Column is anything other than decorative. The body is built up from butted Panels joined by the Flat & Angle Brackets. It is attached to the chassis by 2 A/Bs towards the rear and by bolting the bottom of the Radiator to the Front Axle.

A MODEL Above right the model I built, the one on the manual cover, some 38cm long. The actual blue is again a little darker than in the photo and the roof is black like the wings & chassis. Building it took quite a long time because the butt-jointed parts require careful assembly and numerous Brackets are needed – including virtually all of the 50 Angle Brackets available.

The chassis was generally straightforward except for two

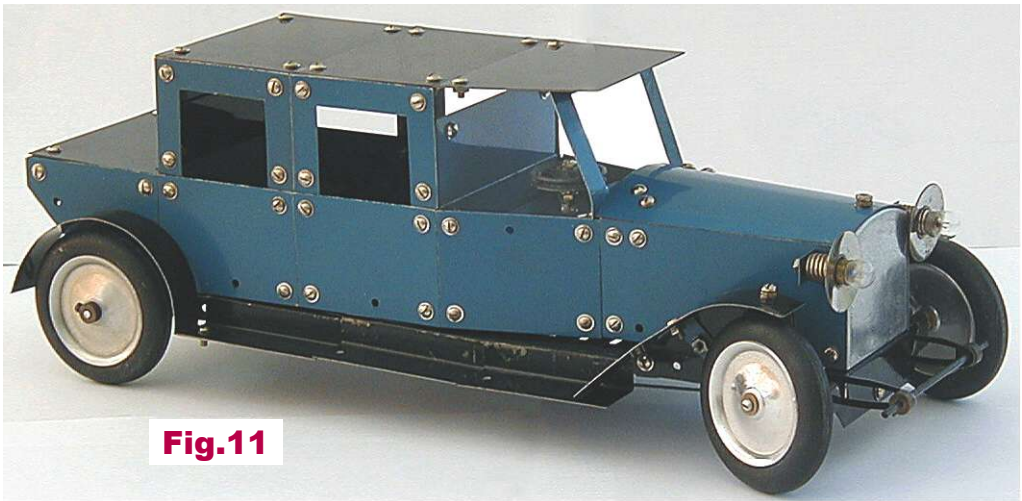


Fig.11

major problems. First, the holes at the ends of the Track Rod #V k were 4mm too far apart, and secondly, the Bushes #Bu, 12mm u/h, were too short by about 4mm. In both cases substitute parts had to be made, and also Nuts to fit the new Bushes.

It was best to make the body separately, without the roof, and then attach it to the chassis, with the roof added last. The Body Panels were accurately made and mostly fitted together surprisingly well. Care though had to be taken where, as was often the case, two Brackets had to be overlaid – their order had to be correct if a neat job was to result. Even so the holes in a few Brackets had to be elongated, as did the holes for mounting the Windscreen.

Given that the Steering Arms could be made to pivot it seemed a pity not to have working steering. This was achieved by substituting a suitable length of Screwed Rod for the Steering Column so that a substitute Steering Wheel could be nutted to it. Then a length of cord was wrapped several times around its lower end, with the ends of the cord attached to the Steering Arms after passing around a vertical Long Bolt situated just behind the centre of the Track Rod. The actual Steering Column was used a badge bar at the front of the Chassis Side members.

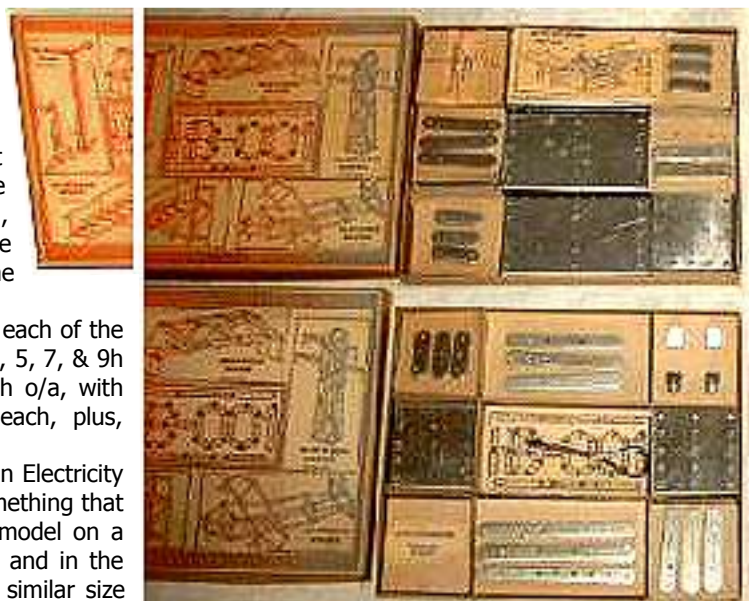
AUTO-CONSTRUCTOR: S4

OSN 40/1218

Snippet. 'New' System: BREMEN 4 sets, described as 'HB-Spielzeug Bremen 001', were offered on Ebay, with a blurry photo showing the open boxes and part of the lids. Two of the Sets are shown right with the left side of the lid taken from one of the Sets not shown. The lids look to be identical and HB-001 can just be seen in the centre panel (and more clearly in the centre compartment of the lower box), but not 'Bremen', and possibly it is part of the maker's name or address. The contents of each Set differed and had no doubt become muddled at some earlier stage.

The parts were said to be aluminium and examples of each of the main ones can be seen in the two sets right. They are: 3, 5, 7, & 9h Strips; Plates, perhaps flanged on 2 sides, 5*5 & 5*11h o/a, with only the outer holes and the centre 5-hole row in each, plus, probably, 3 & 5h long DAS, and an A/B.

The 5 models on the lid are an Aeroplane, a Bridge, an Electricity Pylon, what might be a Street Lighting Standard, and something that looks like a Flight of Steps. There is probably another model on a panel or model sheet in the top of the upper set right, and in the centre compartment of one of the Sets not shown is a similar size 'sheet' with the Aeroplane on it. No Wheels were among the parts but the models are too indistinct to say for sure that none are used in any of them.



BREMEN: S1

OSN 40/1218

This German system was mentioned in OSN 17, p477. Also Baukästen has a picture of a set on p215, and indicates that it was made in the 1930s; on the maker there is only 'westfälischer Hersteller', that is: made in Westphalia. My comments and pictures are based on a Nr.3 set. There is no indication of date except perhaps the printing information on the manual: 'Bald & Krüger, Hagen, BAH 25 12000. 11. 48.', which suggests that it was printed in November 1948. Hagen is a town in Westphalia, which agrees with Baukästen. Neither the manual, nor the box gives any indication of the maker.

The PARTS Fig.1 is taken from the Illustrated Parts in the manual; the actual parts are shown in Fig.2, with top & bottom views of PN1 & 13-18. They are steel, painted white or red on only one side, save the Wheels. The system includes Nuts & Bolts, but this is not the main way of assembling the parts, and Set 1 does not contain a single Bolt. Some parts have tongues while others are made of two pieces soldered together to give a space between them along their sides. This allows a tongue to slide in and this is the main method of assembly. The end tongues are not shown for PN1-6 in the Illustrated Parts. The diameter of the holes is 3.0 mm, and the distance between holes is usually 9.0mm, but 5.5mm for some of the cross holes in PN2, 5, & 8.

Parts #1-11 with tongues. They are painted white, and all have 3 tongues. The rectangular cutouts in some of the Plates are referred to as windows. The dimensions below for PN1-11 are over the tongues / for the central plate.

PN1 & 2: 73*42mm / 68*34mm.

PN3: 42*39mm / 34*34mm.

PN4-6: 73*25mm / 68x17mm.

PN7-11: 42*21mm / 34*17mm.

Parts PN12-18 are red.

PN12 it is a kind of DAS which is used as a bearing for an axle. There is no tongue, but a hole in the middle of the top surrounded by four slotted holes; each side arm has a row of 3 holes.

PN13-16 are 17mm wide & a quarter circle in section. As explained earlier they are made from two pieces and the tongues can push into their sides. Their overall lengths are 34, 68, 104, & 47mm respectively. As can be seen PN16 has a closed end.

PN17-18: Large & Small Wagon Wheels, 34 & 22mm diameter. Both are flanged. There is nothing to fix either to an axle but they are a push fit and hold more or less.

PN19: nickered Axle, 3.0mm Ø & 64mm long.

PN20: nickered Crank Handle, total length 97mm with a 74mm shank.

PN21: nickered cheeseheaded Bolt, 2.8mm Ø, 10mm u/h.

PN 22: hexagonal nickered Nut, 6 mm A/F.

There are also brass **Washers** which are not mentioned in the manual.

No **tools** are mentioned in the manual, and there are none in the box. Most assemblies are made with sliding parts but some Nuts & Bolts are used in the Set 2 & 3 models.

The parts are well made, with the tongues usually rather hard to push home – it would be difficult to insert all the length of a tongue at the same time, one must begin at one end of the slot and then slide the tongue into the slot (as shown in the manual). The parts show absolutely no sign of corrosion,

Fig.3

Bauteil No.	Kasteninhalte INGENIO No.		
	1	2	3
1	4	2	2
2	—	2	2
3	6	6	6
4	2	2	2
5	—	2	8
6	4	4	6
7	8	6	6
8	—	4	4
9	8	6	6
10	—	2	4
11	—	2	4
12	—	2	4
13	8	10	10
14	6	6	10
15	4	4	8
16	4	8	8
17	—	—	8
18	—	4	4
19	—	2	10
20	—	—	2
21	—	6	10
22	—	6	10

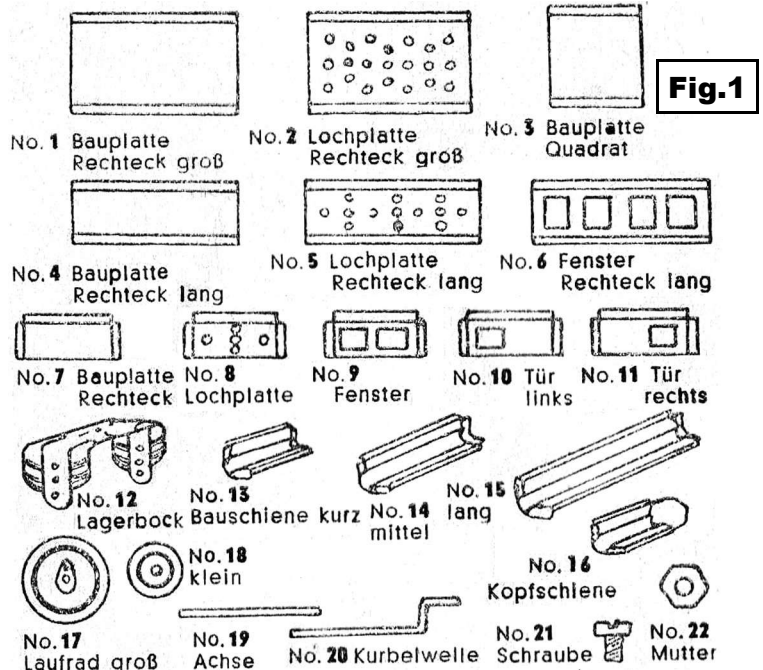


Fig.1



Fig.2

however bits of the paint are sometimes missing, and one PN1 has never been painted.

The SETS This system has three sets: 1, 2, and 3. Fig.3, taken from the manual, lists their contents. As can be seen Set 1 consists of the ¼-circle parts, and Plates, plain & 'windowed', but with no Wheels, no N&B, and no Perforated Plates. There are a few mistakes the Inventory, for instance it has 4 of PN1 for Set 1, and only 2 for Sets 2 & 3. This is incorrect as it is indicated in the Manual that all the Set 1 models can be made with Sets 2 & 3, and the Set 2 models with Set 3. Moreover, my Set 3 includes 4 of PN1. The same mistake occurs for PN7 & 9.

My Nr.3 is shown in Fig.5. The size of the cardboard box is 395*130*35mm. The words under the picture on the lid are DIE MODERNE METALLBAUKASTEN.

The MANUAL is in German with 8 pages 20*14cm, including the cover right. Pages 2 & 3 give the basic principles of construction and 10 models for Set 1. Pages 4 & 5 have six models for Set 2, and pages 6 and 7 four for Set 3. Finally, page 8 with the Illustrated Parts,

Fig.4

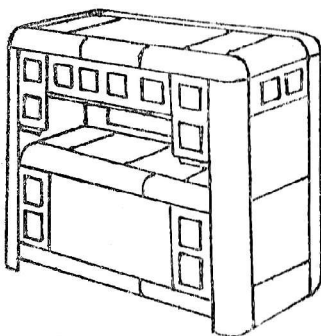




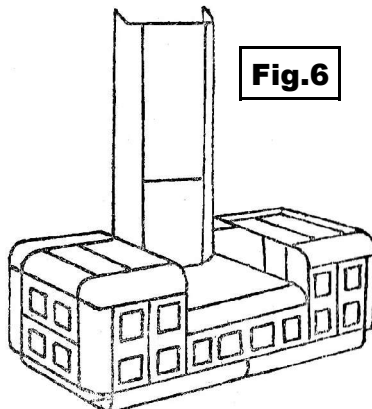
Fig.5

the Inventory, and a table showing the parts necessary for building each of the 20 models. Two Set 1 models are shown below in Fig.6, & 3 for Set 3 right in Fig.7.

REMARKS This original system is well adapted to building cube-like models but unfortunately many objects do not actually look like 'shoe boxes'. The manual gives only static models for Set 1, & only vehicles for Sets 2 & 3. As there is nothing to fasten the Wheels to the Axles, it is impossible to build complex mechanical models – pulleys are made with two Wagon Wheels just pushed together. The most sophisticated model is the No.20 Crane on Wheels; the jib cannot rotate but it can be raised.



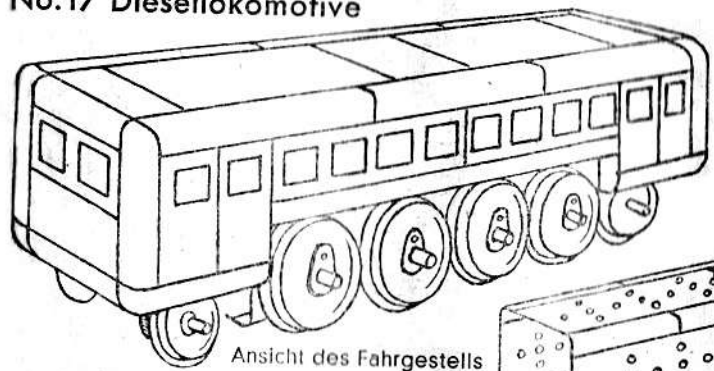
No. 6 Küchenbuffet



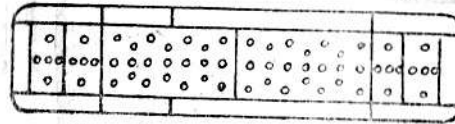
No. 10 Frisiertoilette

Diese Modelle können aus INGENIO 1, 2 oder 3 gebaut werden.

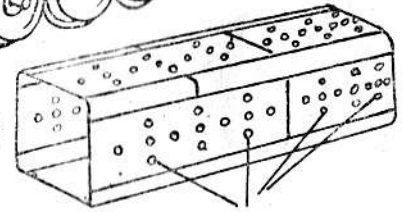
No.17 Diesellokomotive



Ansicht des Fahrgestells

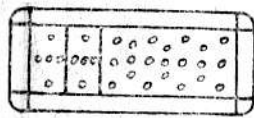


Wagenboden, von unten gesehen

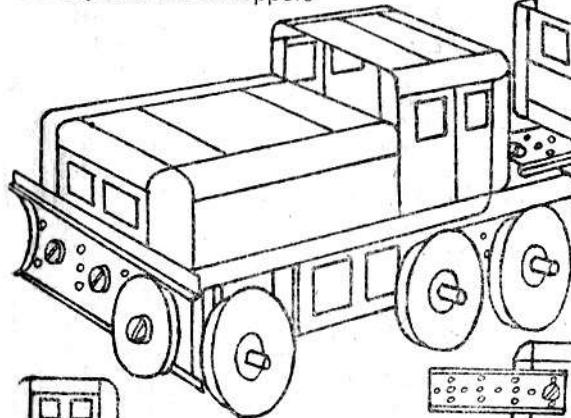


Diese Löcher dienen zur Achslagerung

Fig.7

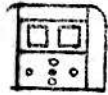


Bodenplatte des Schleppers

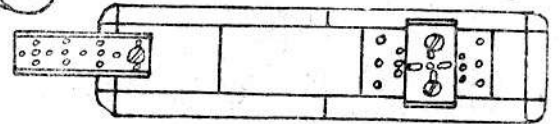


Ansicht des Fahrgestells

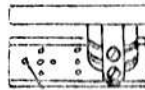
No. 18 Sattelschlepper mit Anhänger



Kühler des Schleppers. Lampenträger abgenommen.

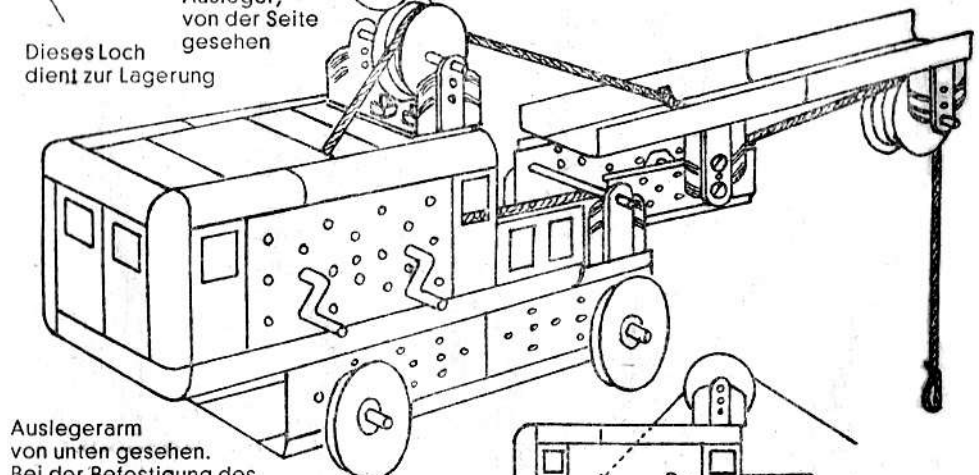


Wagenboden, von unten gesehen

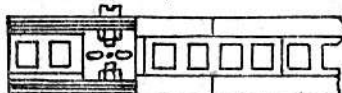


Ausleger, von der Seite gesehen
Dieses Loch dient zur Lagerung

No. 20 Ladekran



Auslegerarm von unten gesehen. Bei der Befestigung des Lagerbockes ist über die Rechteckplatte No. 6 eine Lochplatte No. 8 zu legen



Seltenansicht des Kranwagens

More MERCATOR Types 1 & 2 of this Belgian system, and a possible Type 3, were identified in 29/848. Now two Ebay lots of parts to hand, plus a No.1 set kindly lent to me by Richard Gilbert, all with their manuals, shed a little more light on the MERCATOR story.

The First Lot & the No.1 Set (Type 1e)

THE LOT came from France and the parts are probably nearly all of a large set, most likely a No.7. They are broadly similar to Type 1, with the same 13mm pitch holes, but their PNs & the style of the manual are different, and it will be argued that on balance it seems likely that this Lot dates from before Type 1. For ease of reference I'll call it Type 1e (where e = early). The manual covers provided the material for the MCS entry.

One of the Manual models, a Bombe Volant V1, indicates post-WW2 and it is said in the Manual's introduction that the models are an extract from 'notre catalogue général de modèles', and that this was necessitated by a continuing shortage of paper. So was there an earlier full manual? The Type 1 version in OSN 29 can probably be ruled out because some parts listed in it are not in Type 1e. (It was suggested in OSN 29 that because the MCS/Type 1e PNs are (mostly) 6-figure numbers, against the 3-figure of Type 1, this could point to Type 1e being later than Type 1. But as will appear the 6 figures are very likely the factory numbers of the parts, perhaps used before the 3-figures PNs were established.) It is also unlikely that there would have been more paper at any earlier time after the war, so if there was an earlier larger manual it must have been prewar (MERCATOR's start date isn't known). But perhaps 'notre catalogue' simply referred to a manual then prepared but unpublished, and possibly it subsequently became the Type 1 edition.

The Parts as Listed. The Type 1e parts are listed in the Manual together with their material, colour, & price. 61 of the parts are on C3 (as in MCS), but there are also some on C2, listed under 3 headings: Pièces spéciales (10); Pièces combinées (12); & Outils de montage (Tools) (2). It seems that the C3 parts are those made in one piece, a Strip for example, or a Pulley with Boss machined from the solid. The Spéciales are again one piece parts of various sorts but their PNs are 4-figure followed by /a or /b – so perhaps they were parts already produced for other reasons (some of them are basic parts such as the A/B & Flat Trunnion, and are included in the No.1 Set). The Pièces combinées are parts made up from more than one component, mostly those with a peened-on boss, and 2 PNs are shown for each, no doubt the factory refs of the different components. For example a Pulley is '2 x 131203/278051' where 2 pulley discs and a boss would be needed. Also included are the 3 sizes of Boiler with Ends (the Ends have a boss), and the 3h long version PN is: 2 x 278051/2 x 131225/121203; the 5 & 8h long ones are the same except that the last figure becomes 5 & 8 respectively.

The Type 1e parts include all but the following 11 of the Part 1 parts in OSN 29 List: #14 or 15, a 15h Strip; #19 Curved Strip; #110, 10mm Loose Pulley; #128, 200mm Axle; #168 Worm; #169 Contrate; #174 Chain; #196 Tyre; #200, steel Bolt; #205, steel Nut; #213 rubber Axle Stop.

Type 1e parts not in Type 1 are a Loaded Hook and a Rubber Wheel.

Some of the Type 1 parts differed slightly from their Type 1e counterparts, as follows: #53 1*4h A/B was 1*3h in Type 1e; #111 18mm Pulley was 20mm; the 5.0mm Axle diameter was 4.9; #138 100mm Screwed Rod was 80mm; #170 130mm Spring was 30mm, & #171 Spring, 4mm Ø & 1,40mm [sic] long was 3mm Ø & 400mm long (some of the lengths are doubtless in error); #215 10mm Washer was 12mm Ø.

The Actual Parts. There follows points of interest about parts not described before and about the Type 1e parts which differ from the Type 1 descriptions in OSN 29, 30/876A, &

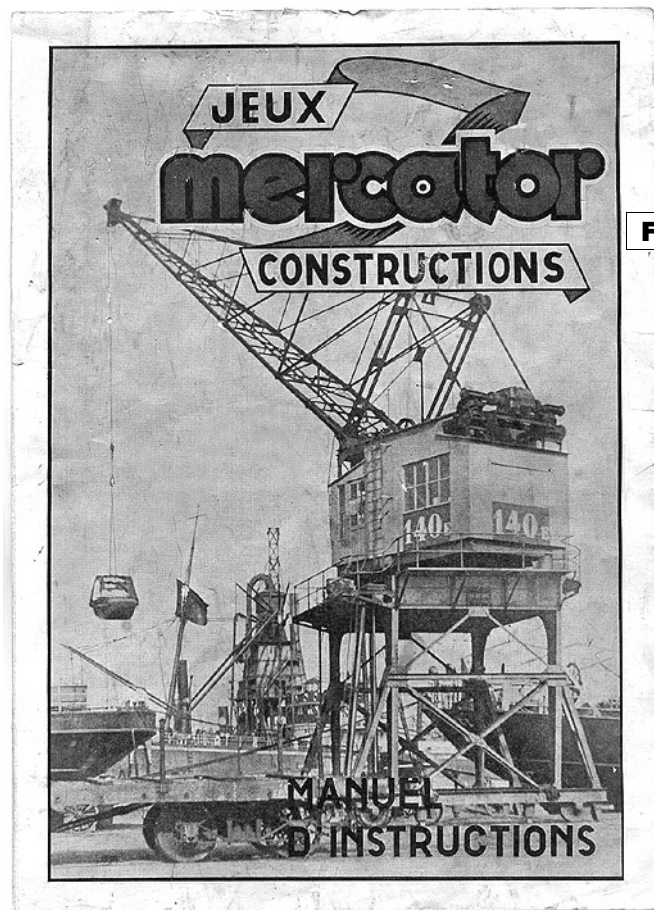


Fig.1

33/972. (Type 1 PNs will be used.) • Except where stated the **colours** are as Type 1. Green parts are a light to medium shade. • With the exceptions noted **bosses** are double-tapped with an unusual thread. The **Set Screw** shank is 3.8mm Ø, and the pitch of the thread is 26tpi (almost 1mm). So this is no doubt the Belgian No.20 thread (see 8/202). Both RH & CH Set Screws were found, both nicked steel with heads 7-7½mm Ø, and 6½mm u/h,. #50 **A/B**. Those found are typically 13*14¼mm with both slots 7.9mm long. • #95 **6*6h Flanged Plate** is grey. • The discs used for the **Bossed Discs** #100,101,102 (#100 would normally be called a Bush Wheel) are formed for use as the pulley discs for **Pulleys** #105,106,107. Their rims are 6, 8, 8½mm wide. • #109 **Loose Pulley** is dull plated as Type 1 and generally similar but has no face holes because the discs are tabbed rather than riveted together. As before it is fitted with a black Rubber Ring. • #111 **Pulley** is 18mm Ø as in Type 1. • #114 **Flanged Wheel**. #114 & 115 are both described in Type 1e as Roue, and in Type 1 as Roue à gorge, 20 & 38mm Ø respectively in both Types. I thought roue à gorge meant pulley but it is clear from the manual models that #114 is a Flanged Wheel. Those found are, with small changes to the dimensions, as in OSN 29. Perhaps #115 is a larger version. • **Axles** are nicked steel, 4.85mm Ø, and included two 80mm long. • #130,131 nicked steel **Crank Handles**, 100 & 145mm long o/a. They are 5.00mm Ø, too large to pass through some of the holes. • #142 **Boiler**, 8h long, is made from a rolled 8*8h plate and is 33¾mm o.d. when squeezed slightly to give a butt joint; the 36mm o.d. End is then a push fit on it. • #150 **Spanner**. The OSN 29 description was wrong; it was, like this one, 98mm long o/a, with the jaws angled at both the flat & cranked ends. • The **Pinion** #160 and **Gear** #165 are single-tapped M4. • #180 **Collar**, 10.0mm Ø and 10mm wide, double-tapped. • #181 **Coupling**, 10.0mm Ø and 20.2mm long, double-tapped at about 11mm centres. • #185 **Double-Arm Crank**. A red 3h 'strip' with a centre boss. • **N&B Bolt** brass as OSN 29; the hexagon **Nut** plain pressed steel, 8.1mm A/F and 2.2mm thick. • #203 **Grub Screw**, M4, pointed end, 4.2mm

long. • **Small part boxes**
The Lot included 2 identical to those in the OSN 29 No.5 set.

Type 1e Parts not seen. • #53 A/B. • #89 Perf. Plate 8*8h. • #115 Flanged? Wheel. • #124, 128,129 Axles, 95,200, 250mm. • #135 Crankshaft. • #137 25mm Screwed Rod, described as half threaded in Type 1. • #138



Fig.2

100mm Screwed Rod. • #140,141, 3 and 5h long Boiler. • #155 Screwdriver, but in the Manual it is said to be nickel with a green handle. • #170 & 171, Springs. • #177 Cord, 1m. • #178 Hook & Loaded Hook. • Rubber Wheel (Type 1e: #390001). There were though 4 Road Wheels among the parts. One is shown in Fig.2 and is 49mm o.d. It's unlikely that the tyre could be removed. The bore is 5.2mm. This may well not be original but no other foreign parts were in the Lot.

Type 1 parts not seen for future reference (apart from certain lengths of Strip, Axle, etc): • #19 Curved Strip. • #53 A/B. • #110 10mm Loose Pulley. • #115 Flanged? Wheel. • #155 Screwdriver. • #168 Worm. • #169 Contrate. • #170 & 171, Springs. • #174 Chain. • #177 Cord, 1m. • #178 Hook. • #195 Tyre.

The Manual It is in French and consists of 7 loose sheets 190*267mm, inside covers 195*274mm. The sheets, and a vee formed inside the covers at the fold, are punched, and are held together by a short length of thin string. The front cover, Fig.1, is in the style of the Type 1 lid in OSN 29 but in B&W and with a different industrial scene. Inside are the lists of parts already mentioned, and an introduction on C2 mentions Sets 1-8, and linking 'a' sets; also extra parts and boxes of 50 N&B sold separately. On the back is a halftone of a Crane (as in MCS) with brief explanations of 9 constructional details. The only name given, of the printer probably, in small type at the bottom of C4, is M. Weissenbruch S.A., Bruxelles,.

The inside pages have models for Sets 1-7, with one page, printed double-sided, for each set. There is just one reasonably sized halftone for each model, and all are in the OSN 29 manual with the same name and in all but one or two cases the same model number. One of the No.7 model is a No.8 in the OSN 29 manual There is no indication if there was ever a No.8 page but there is possibly one in the Ebay set mentioned later.

There are 13,7,7,8,7,6,6 models for Sets 1-7. The first & last models for each set, with my English descriptions where appropriate, are: **1:** 5137 AVION MONOMOTEUR, WAGON GRUE (Mobile Crane); **2:** 5146 CARROUSEL, 5152 CAMION (Lorry); **3:** 5144 LOCOMOTIVE, 5169 TRAINÉAU (Sledge drawn by 2 dogs); **4:** 5168 HYDRAVION (Flying Boat), 5158 GRANDE GRUE ROUTIÈRE (Large Mobile Crane, the model on C4); **5:** 5166 TRACTEUR ET REMORQUE À BOIS (Tractor and Logging Trailer), 5164 ASCENSEUR DE MINES; **6:** 5173 AUTOBUS URBAIN, 5171 DOCK FLOTTANT POUR L'ENFONCEMENT DES PALPLANCHES (Floating Crane used to drive wooden piles); **7:** 5.187 AUTORAIL TRIPLE (3-Unit Railcar), 5.191

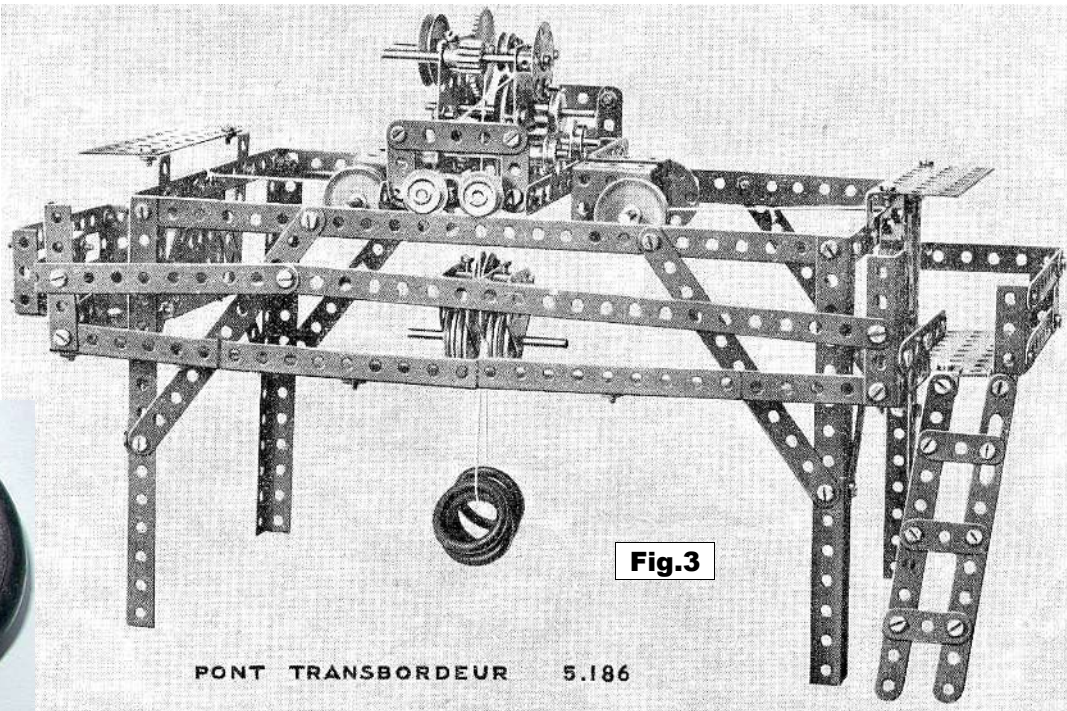


Fig.3

PONT TRANSBORDEUR 5.186

TRAIN DECAUVILLE (Narrow gauge Loco & 2 tipping Wagons).

One of the more 'mechanical' No.7 models is shown above. The crab runs on the Flanged Wheels #114.

Snippet: AN EBAY SET The parts are in a dark brown 4-drawer wooden cabinet similar to the No.8 one shown in the OSN 29 manual, though with 'old-fashioned', hinged, 'outline' handles. At 42*31*16cm high it is about the same size and has a hinged lid with a label on the inside like the one on the OSN 29 No.5 lid. The manual with the Set is like the Type 1e one described above except that it has 8 loose sheets inside. The parts of the first 7 that are visible match those for Sets 1-7 above but not enough of the 8th can be seen to be sure it is the No.8 sheet.

THE No.1 SET Its box is red, 31*20¾*2½cm, with a portrait label identical to the Type 1 shown in 29/848, and pasted along the length of the lid. There are 'MERCATOR' labels on the lid's end aprons with a '1' sticker beside one of them. The parts are strung, mostly individually, to a red card with thin white cord. The N&B etc are in one of the red boxes as before, also strung to the card. The Set is complete except that 4 parts, almost certainly Pulleys #109 (see 29/849), have been removed. From the size of the empty space they were not fitted with Rubber Rings.

With the few exceptions noted in the set contents listed below the remaining parts match those in the Type 1e Lot. The main point of interest is that though the N&B can only be seen through the clear panel in the top of the small parts box, they look to have the same Belgian No.20 thread that was used for most of the bosses in the Type 1e Lot, and for those in these parts.

The **Set Contents:** • 4,2,2,8,6,4x 11,7,6,5,3,2h **Strips.** • 2x 1*3*1h **DAS.** • 8x **A/B.** • 2 **Flat Trunnions.** • **Flanged Plates:** 1x 3*7h red; 2x 3*3h, grey. • 2 **Bush Wheels** with 10.5mm Ø bosses. • The **Set Screw** is the nickle steel CH type with the Belgian No.20 thread. • **Axles:** 2x 70mm, and 2x about 25mm which can be seen in the small parts box. • 1 **Crank Handle**, 4.8mm Ø and 100mm long o/a. • Some **Spring Clips** can be seen in the small parts box. • The **N&B** are nickle steel. The **Bolt** looks like the Set Screw, with the same thread. The **Nut** is hexagonal and about 8mm A/F. • 1 **Spanner**, strung on top of the 3*7h Flanged Plate. • 1 **Screwdriver**, 119mm long o/a with a 2.8mm Ø shaft and a 70mm tapered wooden handle, both painted green. • Judging by the stringing holes the missing **Pulleys** have 4 face holes rather than tabs. >>

on the 6 pages of Type 3? models in OSN 29. **Set 0:** 22 models from 0.6 Pantin (Puppet) on p3 to 0.27 Trapère équilibriste (a wide See-saw with a bar at each end) on p8, plus 0.30 Patinette (Scooter) among the 'A' models on p9. **Set A:** 11 models plus those on the missing pages, from A.28 Dog-Car [sic] on p9 to A.52 Grue No.3 on p18. **Set B:** 8 models from B.53 Tourniquet (Turnstile) to B.60 Bobineuse (Spool Winder). There is also a **D model**, D.61 Eglise on p22 (IBC).

There is a one line drawing for each model, quite large for some, plus a parts list for most of them. The parts may be listed under their names or by a code letter, sometimes the initial letter of the name. The method isn't consistent and can be fairly confusing. The models in Figs.4-6 are shown full-size apart from the Dog-Car at 75%. The latter, an A model, is the only one in the manual in which the Circular Plate is used (the background colour is due to discolouration of the paper). The 64mm Pulley Disc is used in the Motorcycle and one other B model. The Tyres are not used elsewhere, nor are they referred to. The Winder is the most complicated 'mechanical' model.

Some parts are used in the models that have not been noted so far, as follows: 8,10,12,13,14,16h Strips; a Wire & a Loaded Hook; a Driving Band that looks like spring cord; and possibly a small Roller or Loose Pulley.

The Sets The introduction in the Manual has a paragraph about the sets available and it says that there are 13 in all, Sets 1-6 described as boîtes secondaires / kleine dozen, and Sets 0, A-F (the 0 is sometimes written as the letter O). Then it is said of these latter sets that each, starting from 0, can be converted to the next larger set by adding a Set 0, and thus if a Set 0 is added to a Set B, it becomes a Set C. That sounds clear enough but as Jacques Pitrat pointed out when I checked with him that I had understood the French correctly, it seems

to mean that a Set F would simply consist of 7 of the Set 0. That sounds odd but if correct it would mean that to make the models in the present manual a Set 0 would need to contain for instance a Circular Plate (to give 2 for the Set A Dog-Car), 2x 64mm Pulley Discs (to give 4 for the Set B Motorcycle), and 2x 25mm Pulleys (to give 4 for a Set A Travelling Crane). A unique marketing idea, or did the writer of the Manual get it wrong? One possibility that has been suggested is that the Sets 1-6 were the 6 linking outfits needed to take a Set 0 to a Set F. In that case Sets 0 & 1 would still have to have, between them, the 2 Circular Plates for the Dog-Car - still unusual to have this part in small sets but more credible than Set 0 as the universal linking outfit.

Snippet: An Ebay Set, again from the UK. The lid and manual cover are as might be expected (see 29/851) but there appears to be no Set Number on the lid. Points of interest in the box (Fig.7) are the 10h Strips, the 2 sizes of Pulley top right, and the 2-colour Cord. The N&B are in a box top left with 2 A/Bs to its right, and an Axle, & a second Spanner, below it, under the cellophane. 5 pages from the manual were shown, 3 with models from the present manual, though at least one with a different page number. The other pages have a reasonable Chair-O-Planes model of about 12" diameter, and the Crane below, with the Wire Hook just visible. Either model would need a lot of parts, mainly Strips.

Fig.7

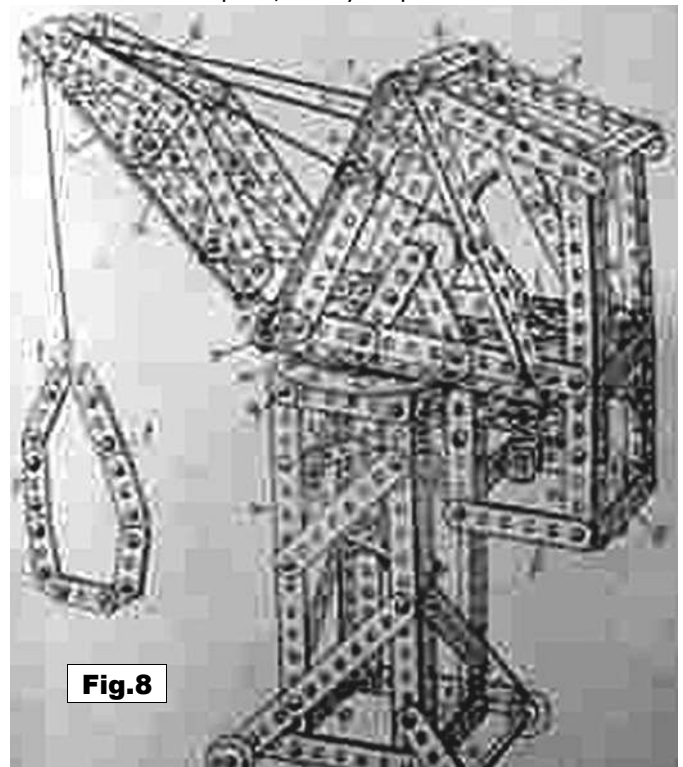


Fig.8

MERCATOR: S11

OSN 40/1224

CONSTRUCTION in 2008 from a catalogue in German and the Eitech web site. 6 new sets were added for 2008 and 11 dropped.

The new range, with the new sets asterisked, is: 03,05*, 08*,12,17,18,19*,20*,23,24*,30,31,51,52,53,54,61,62,64,67, 72,73,74,82,83*,84,85,87,155. **The lids** of the new sets, and some of the existing ones, are of a new design with emphasis on 'eitech', & with CONSTRUCTION in much smaller letters. The example in Fig.1 overleaf is typical.

The New Sets. • **No.05** with over 270 parts. The featured model is a small Crane in which the tower and integral horizontal jib slew. Alternative models shown are a Windmill & a Gantry Crane. • **No.08** has over 430 parts and the lid is shown in Fig.1. • **No.19** has the Lorry in Fig.2 on its lid and

has over 500 parts including hollow Tyres (Eitech: Luftreifen). Notice the one-piece Cab Side. • **No.20** with over 420 parts and features what is perhaps a Multi-Rocket Launcher on the lid, with smaller photos of a Tank & a Mobile Crane (on the Eitech web site the Crane is featured). All the models have tracks. • **No.24** is a 27/40 Mhz R/C set with over 250 parts and the 2 models shown have 'utility' bodies sitting above the R/C Unit and the large, fat Wheels. A battery charger is included. • **No.83** (over 170 parts) features a wheeled Bulldozer, and 2 variant models are claimed. The Wheels and Cab Sides are as in the No.19.

None of these sets have a Motor (apart from No.24 of course) but for all but No.08 there is an Accessory Pack with a Motor, blue plastic Gears, & the other parts needed for motor-

CONSTRUCTION [1]: S7

OSN 40/1224



Fig.1



Fig.2

ization, though which functions are powered isn't stated.

The Deleted Sets. These are listed below with a reference in brackets to when they were described in OSN.
 • **No.06**, 582 part multi-model outfit with Geared Motor (30/885).
 • **No.07**, 378 parts for 3 'old-fashioned' Lorries (30/885).
 • **No.10**, 319 parts for 3 Racing Cars (30/885).
 • **No.14**, 500 parts for a variety of small models (34/1023).
 • **No.16**, 230 parts for various small Goods Vehicles (35/1062).
 • **No.22**, the first R/C set (35/1062).
 • **No.60**, 253 parts for 3 small 'framework' models (30/885).
 • **No.75** was mentioned in 22/622 but later it had over 250 parts for a

variety of Solar models.

Accessory Packs Nos.112 (a Battery Box with Switch), 113 (centimetre to inch Brackets), & 134 (a Geared Motor and Controller, see 37/1107) have been dropped, and Nos.135 & 136 added. **No.135** has a blue Motor with blue plastic Gears and various other parts; **No.136** is the 3-channel Controller from No.134.

Postscript 2 sets have been added since the above was written, **No.55**, a 'simplicity' Loco, & **No.80**, a small Tractor & Trailer.

The Eitech Name. Browsing the eitech web site I came across the full company name: Eichsfelder Technik eitech GmbH. So that's where Eitech comes from. The address is Industriestraße 1, D-37308, Pfaffschwende. Pfaffschwende is in the district of Eichsfeld, and seems, on the map, to be a quite small town.

OSN 40/1225

CONSTRUCTION [1]: S8

A KIS TECHNIKUS Manual The Hungarian KIS TECHNIKUS, and its possible connection with TECHNOKID, was mentioned in 20/583. Now a manual has become available, and as will be seen, there is indeed a strong TECHNOKID connection.

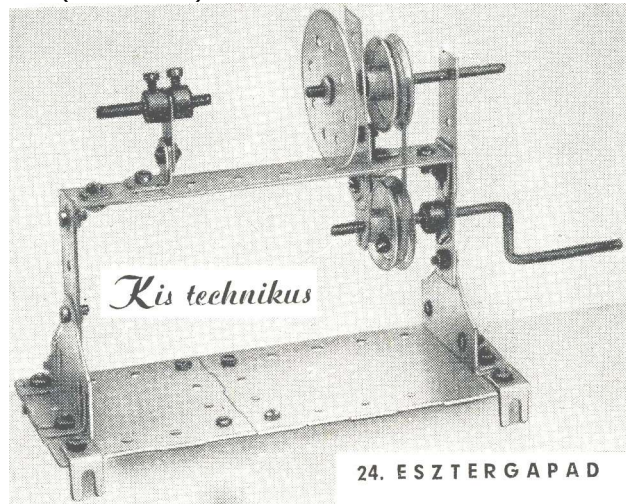
The manual is in Hungarian (the translations in what follows are not guaranteed) with 12 unnumbered pages plus covers, 228*158mm. The front cover, below, is the one described in

BUDAPESTI VT. MECHANIKAI JÁTEKGYÁRA' (=Budapest mechanical toy factory) with what is probably an address, Budapest XX, Ságvári Endre - U. 24 (Ságvári Endre was a resistance fighter killed in 1944). Exactly the same maker & address are on the back cover of the first TECHNOKID manual described in OSN 20, and the PR along the bottom is identical too except that it has '27263/LD05' in it against '27007/LD05' in the present one.

The other pages have 42 models from 1. ASZTAL (=Table) on p1, to 42. LÖKHAJTÁSOS REPÜLŐGÉP (=Jet Aircraft). There is the usual range of simple models except that the only ones with wheels are two 2-wheel Barrows. Each model has just a good low contrast halftone about the size of the Lathe below (natural size). There is no mention in the Manual of



OSN 20 with the TECHNOKID model & manual on it. (In passing the parts in known TECHNOKID sets are all aluminium, none are red.) Kis Technikus means Young Technician and Fémépítőszekrény, metal construction set. C2 has an Introduction which in its last paragraph says that KIS TECHNIKUS consists of certain TECHNOKID parts. C4 has the name of the maker, MEJA (in a gear wheel logo), and 'Made by the



OSN 40/1225

KIS TECHNIKUS: S1

there being more than one set.

No list of parts or set contents are given - the parts that can be seen in the models are: 8x 3h, 4x 4h, 2x 6h, 2x 4x 8h, 2x 9h Strips; 12 Angle & 2 Flat Brackets; 2 each of 4*4 & 4*6h Plates; 2 Flat Trunnions; 2 Pulleys; 2 Bush Wheels; 5 Collars; 3 lengths of Rod (with probably 1 of each); a Crank Handle; 22 N&B. All the parts are in the TECHNOKID range. Many of them

can be seen in the Lathe including the Plates with shallowly crenellated edges. Noticed that a Flat Bracket with an open end is used to provide a (notional?) bearing for the end of the Crank Handle. In fact though all the Brackets shown in the models have open ends, all those in the TECHNOKID parts seen have closed ends with a round hole in one arm a slot in the other.

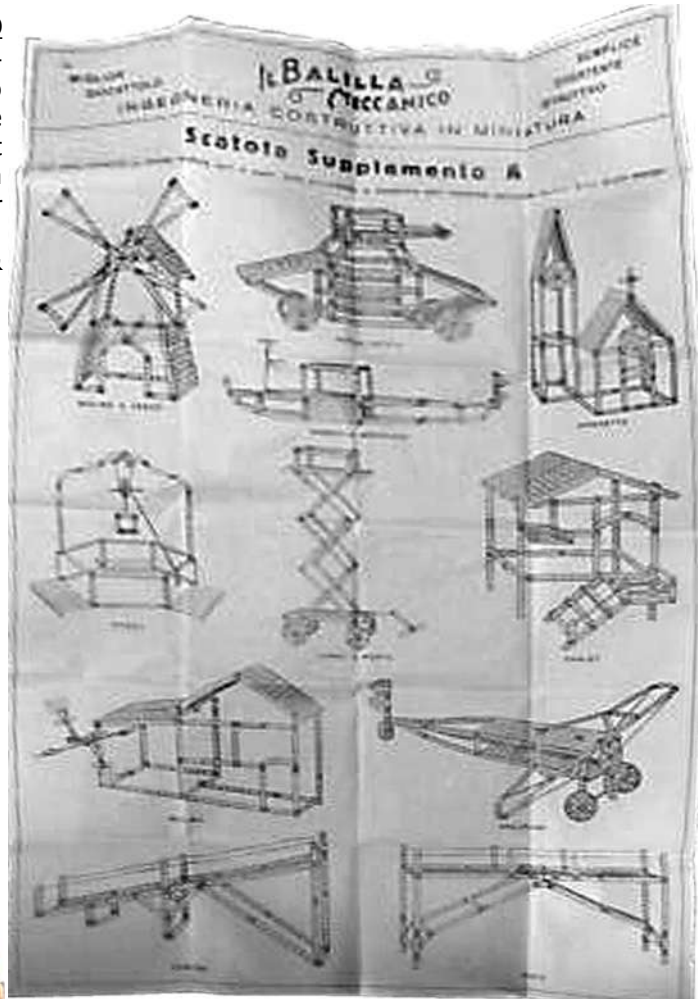
KIS TECHNIKUS: S2

OSN 40/1226

Snippet. 'New' System: **IL BALILLA MECCANICO**

The outfit below was offered on Italian Ebay and is an add-on Set A. The box looks to have a sliding lid and was said to date from the 1930s. According to Wikipedia Balilla was the nickname of a 19th century Italian patriot and a current meaning is 'little boy'. It also seems to occur in the names of a variety of items from Fiat cars to table football games. Prewar 'Opera Nazionale Balilla' was the fascist youth organization.

The parts that can be seen in the original photo are: 7 &



11h Strips (and probably other lengths less than 11h); 1*5*11h DAS; 5*11h Flanged Plate; Wheel Disc (with a 3*3h array of holes); Span'driver; Screwed Rod; Hex Nut; CH Bolt.

The box's dimensions were given as 17*11*2cm and scaling

gives the hole pitch as about 6 to 6¼mm, so possibly ¼". Then the hole diameter would be around 3mm.

The model sheet for the Set is shown above and from its heading, and what can be seen of the models themselves, it is conceivable that they could be made from the Set A alone.

IL BALILLA MECCANICO: S1

OSN 40/1226

New System: M'TEK In 33/995 some details (from www. toy-kraft.com) were given of 20 small ENTECH sets made by the Indian company Aries. From the same web site last November the Toy-Kraft brand is now owned by Pegasus International of 321 Udyog Mandir No.1, B.K.Marg Mahin(w), Mumbai - 400016, India. The change probably occurred about 3 years ago. Only 4 construction sets are now available & are listed under the M'TEK name. All the lids are similar in design to the Starter Set right.

The other 3 sets, all smaller, are: Mini Flying Machines with 4 aircraft models on its blue lid; Mini Cars with 4 models on a yellow lid; and Off-Roaders with an orange lid featuring 3 Motorcycles & a Trike. All the models are small and are identical or very similar to those for the ENTECH Mini sets. Unlike the Starter Set these outfits have the set name in fairly large letter top right on the lid & the M'TEK name at bottom right. All 4 sets have the Toy-Kraft logo top left, but it now sports Pegasus instead of a rocking horse.

It is said on the Site that the 3 Mini sets were introduced last June and the Starter Set last October. No details of them were given, nor any prices, but 124 parts can be seen on the Starter lid.



M'TEK: S1

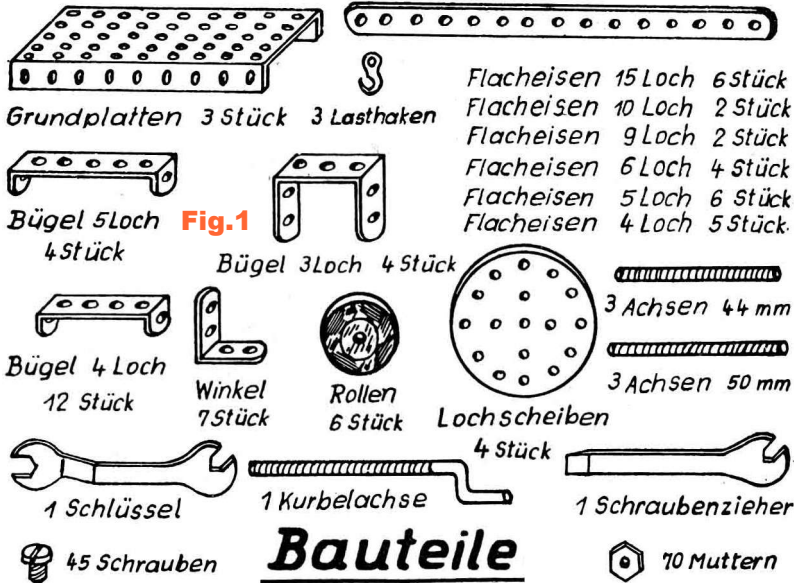
OSN 40/1226

HERSA The name of this small, German, 8mm hole pitch system was mentioned in 16/458 and now more details are available from a near complete No.2 set and material kindly sent by Jürgen Kahlfeldt via Thomas Morzinck.

All that the known material tells of HERSA's history is the star logo on the manual cover and the box lid, plus the PR on the back of the manual: 15000 8. 47 "Szaro" Berlin SW 61, Blücherstr. 22 (ICB Nr. 1053). Hence the assumed date of 1947. A 1943 address register has Szaro as a graphic arts workshop with Blücherstr. 22 as the address and the name Rudolf Szalok. So could the 'S' in the logo stands for Szaro or Szalok?

Another small mystery is that a number of Nr.2 sets & manuals have been seen but never a Nr.1.

The PARTS Fig.1 below, composed from 3 pages in the Manual, shows all the parts. Explanatory notes, where needed, follow. **Holes** are 3.1-3.2mm Ø at 8.0mm pitch, and the **thread** is M3. The ends of Strips & Brackets are fully radiused. Except as noted all the parts are aluminium.



Bauteile

- **Strips** 1.1mm thick and 8.0mm wide, with a few 8.1mm. shown
- The **9*5h Flanged Plate** has square corners and long slotted holes in the flanges. • The **Disc** is 40mm Ø. • The **Pulley** is 22mm Ø and 3½mm wide. It is made from plain, nickelled steel discs riveted together through the centre hole. • The **Screwed Rods & Crank Handle** are brass; the latter is 76mm long O/A.
- The **Bolt** is machined brass; it has a 5.5mm Ø cheesehead, and is 7.2-7.5mm u/h (Jürgen's Bolts were mainly 6.0 u/h, with some 6.5 & a few 4.0mm).
- The **Nut** is hexagonal, pressed, and plain steel, or possibly nickelled. It is 6.0mm A/F and 2mm thick.
- The **Spanner & Span'driver** are respectively

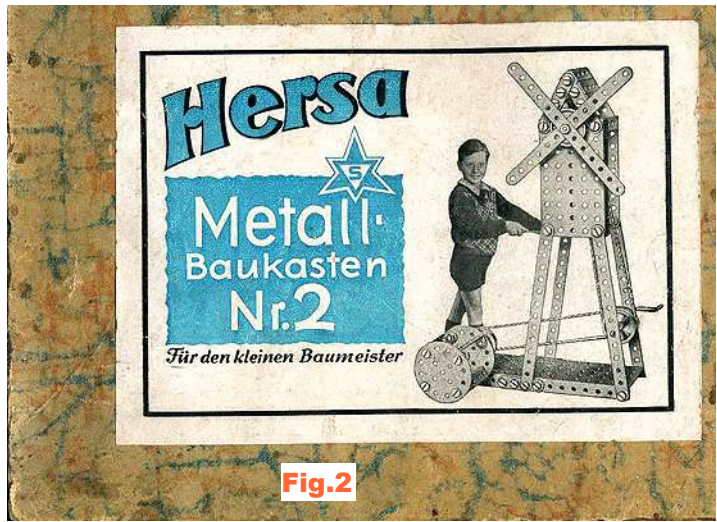
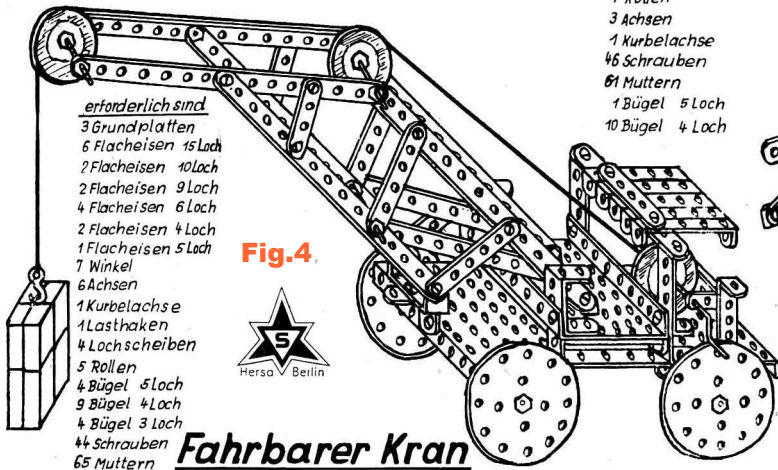


Fig.2

62/65mm long o/a & 1.5/1.7mm thick. • The **Hook** is flat, 13¾mm long o/a, with a 2.5mm hole. Various examples are from .85 to 1.1mm thick

The SET The box is 21½*15½*2cm and the centre & bottom left corner of the lid is shown above. The parts are in 6 loose card trays with a space between 2 of them. One similar set has been seen but most have 7 trays, including one for the N&B, which sometimes has a white lid with the logo in the centre. In these sets the trays on either side of the lidded one are smaller than those on either side of the 'space' in the 6-tray sets. Two 7-tray sets have labels which nearly cover the lid and have some small print under the black frame, but it can't be deciphered. The set contents are given in the Illustrated Parts, left.

The MANUAL is in German and has 32 unnumbered pages, 147*103mm, plus covers. The latter are plain except the front, right, and the PR on C4. The parts are on the first 3 pages,

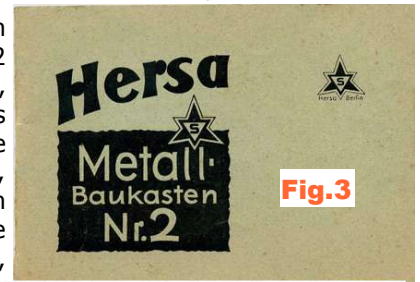


Fig.3

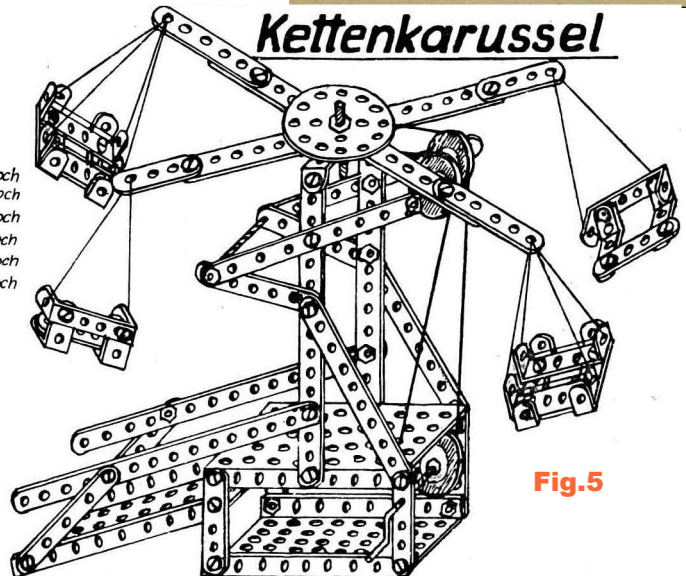


Fig.5

and thereafter 29 models, one to a page, from Anhänger (Trailer) to Kettenkarussell (Chair-O-Planes). There is a clear line drawing & a list of parts for each. The models cover what might be said to be a good range of 'prewar' models, with cord drives as the only mechanical feature. Two of the better models are shown here, at the original size but the text reduced by about a quarter, and rearranged.