

clude the letters F and R.]

**GORDON** EZ mentions constructional and electrical sets made in the DDR by Gordon-Apparatebau KG, Schmalkalden/Thüringen between about 1960 to 1972, but without any further details.

**HELLER** From what I can gather from EZ there was never a MECHANIKUS set in Germany (see 12/321). The tool was called 'Mechanikus' and was included in **HELLER'S STAHLBAU** outfits there. These sets were sold in France under the name **HELLER-MECANICUS** (HELLER-MECHANICUS in 12/321 was an error), and contained the same tool called 'Mécanicus'.

The tool described in OSN, and included in the **MECO** set, was called the 'Constructor' and with its interchangeable heads was more versatile than the 'Mechanikus'.

The period for STAHLBAU is from 1933 to at least 1938 but the French version seems to have been available after WW2 (13/360). MECO dates from about the same time, perhaps from 1934.

**HOHA** Jeannot listed 2 versions, the first with a hole pitch/diameter of 13.2/4.1, and the second, 13.0/4.6. Both had nickel plated parts and the first at least, rubber Tyres and Pulleys. MCS gives 13.1/4.4, and mentions brightly polished plating with some red and possibly, blue parts. It also mentions the early '30s whereas in EZ a small box is shown among early post-WW2 outfits.

Frank Beadle has some HOHA parts and among them is the 11\*5 Flanged Plate (flanged on the long sides) with no holes in the centre 7\*3 area, that can be seen in the MCS models. But Frank also has another which, from a photo, seems to be the last 5\*5 holes of the 11h long one.

**HW Metallbaukasten** A photo of a box lid in EZ has METALLBAUKASTEN diagonally across it and the triangular HW logo of Hans Wunsch, the East German toymaker from Niederwiesa/Sachsen. The firm started in 1949 and this was probably one of the early products. The simple Windmill on the lid includes Strips up to about 11h long, a 9h long Flanged Plate, flanged on the long sides, and a 4h Bush Wheel or Wheel Disc.

**IMPERATOR** See 10/260. EZ gives the Axle diameter as 3.5mm and by scaling, the Strips seem to be about 5mm wide, and the octagonal Hub  $\frac{3}{4}$ " A/F.

**INDUSTRIE** EZ shows an open box with the parts in it, similar to the set shown in MCS. The Strips though don't look as narrow as they appear in MCS and based on the 5mm hole, their width scales at  $\frac{1}{2}$ ". The 8-spoked Pulley Wheels are about 30mm diameter. All the parts have a black metallic finish. Two periods are quoted - 1919 to at least 1931, and 1925 to at least 1935.

**INGENIEUR** This name is listed in EZ but without any details except that it was made by Ihag GmbH of Nürnberg around 1919.

**JOLEI** This little system from c1950 had only some 12 different parts, all in plain aluminium except for the steel N&B. The holes were 4.4mm Ø, spaced at 11.0mm. EZ has a photo of a backing card with some parts on it - I think I can see 3,4,5,7,9&11h Strips, 1\*3\*1 & 1\*5\*1 DAS, an Angle Bracket, and a Screwdriver rather like the MECCANO #36.

**KEIM** EZ gives only the maker, Keim & Co., A.G., für Blechindustrie, Nürnberg, and the period, c1923 to c1928. A graphic from 1923 shows panels falling off a skyscraper in a strong wind (or so it seems). Perhaps it was an architectural system.

**KINEMA** EZ confirms much of what appeared in 12/306. The Tubes are 6mm Ø and the holes 10mm apart, though their size is given as 2mm. The dates are c1946 to 1950.

### KONSTRUKTOR

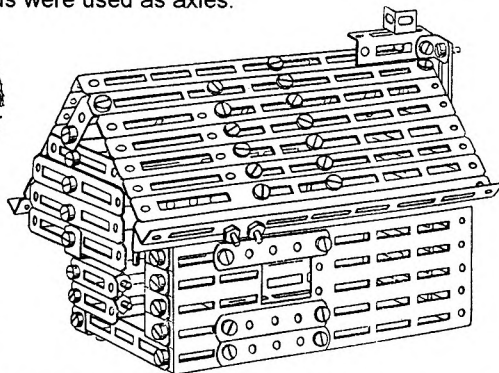
An East German set, but apart from that all I have on it is a copy of the manual cover with the model opposite on it.

### KONSTRUX

A small system of some 30 parts, made in West Berlin by the firm E.P.Damaschke, from about 1946 to 1950. The parts though, painted black, are unusual and, as can be seen in the model below, most have long slots in them with square ends. The holes are 4.1mm Ø and are spaced at multiples of 12mm. Other parts can be seen in a nice, good sized multi-jib Crane shown in EZ, and include DAS, Flanged Plates, small Pulleys, and Discs of several sizes up to about 60mm Ø. The larger Discs have a centre holes, 4 long radial slots, and radial holes between them. These slots are the only ones to have rounded ends. The corners of most parts are slightly chamfered as in the House, but a few on Plates and A/Gs are square - none have the large radius of the 5h Strip in the House. An ordinary Double Bracket is shown in EZ with a similar one alongside except that it has large hexagonal holes in its sides. Its purpose isn't clear but there is a hexagonal section Threaded Coupling that might be about the same size. It looks as if Threaded Rods were used as axles.



Nr. 13



The words Konstrux Deuteron appear on the manual cover under the main KONSTRUX name, but what this signifies I don't know. Also in addition to a logo based on the initials EPD of the manufacturer, there's another (above left) with the name Bergmann, and what might be crossed hammers.

**MABA** EZ has a photo of the #4 Set described in 12/306. The dates given are c1946 to 1950.

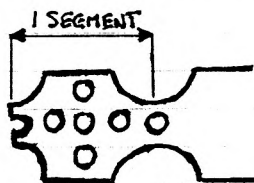
**MAFELL** From EZ. This system was made by Maschinenfabrik Fellbach GmbH, Stuttgart-Fellbach/Württ., around 1930. It consisted of relatively few, large steel parts, including strong wheels with suitable axles. In many ways it was comparable to the GILBERT WHEEL TOY.

**MECANIC/MEKANIK** In answer to the point about which came first (13/361), EZ provides the answer. The original name (in 1948) was MECANIC and the original maker, Dörken & Mankel KG, Ennepetal-Voerde/Westfalen. Later (c1959 to c1963) the system was made by Adrian & Rode, Velbert/Rheinland and by that time the name had changed to MEKANIK. Jeannot wrote that the change was made in

## More on GERMAN SYSTEMS

Following the notes in 15/412, Jeannot Buteux, Sven-Ulrich Glage and Don Redmond have been good enough to sent comments, additional information, and the names of yet more German systems. For reference purposes the initials JB, SG or DR after each contribution indicates its origin. [The illustrations from Jeannot are courtesy of the Constructorama archive.]

- The form of **AKRON** parts is as sketched opposite, and some contain as many as 17 segments. (JB)



- An early 1930s commercial catalogue lists 5 main **ALPHA** sets (ALPHA [2] in MCS) and 4 linking sets. No set numbers are given, only catalogue references, but No.2 can be seen on the one set illustrated. It's the middle sized of the 5 main sets and it's the same as the No.2 in MCS, and with the same numbers of parts. So it's likely that the main sets listed are Nos.00, 0, 1, 2 & 3.

Also included is a Kanonen-Baukasten with 227 parts in a box 34\*18cm. A model is shown (right) and with a geared drive for elevation at least, it is more sophisticated than the 1930s STABIL Kanonen models. (SG)



- Is **AUTO-CONSTRUKTOR** (15/412) a printing error? [Probably yes, it is spelt that way in *Eisenzeit*, p177, but if it's the same as the Dutch AUTO-CONSTRUCTEUR, which seems likely, the name on the pages still in German in the Dutch manual is AUTO-CONSTRUCTOR.] (JB)

- **BURGER** has 4.1mm diameter holes at 12.5mm pitch, Bolts are M4 with hex Nuts, and Axles are 4mm Ø. The parts are painted red, blue, green & cream, and are poorly finished. (SG)

- The lid from a photo of a small **DER KLEINE INGENIEUR** Outfit is shown opposite, and the parts in the box include various Strips, an 8-hole Wheel Disc, a STABIL-pattern Flanged Sector Plate, and 2 of what appear to be Screwdrivers, with large tapering wooden handles. (JB)



- On **DORANDO**. Unlike INGÉNIO (16/430) for example, the metal frame is on the inside and is hidden in the finished model. (JB)

- The initials **F.D.K.K.** stand for FÜR DEN KLEINE KONSTRUKTEUR. (JB)

- There was a connection between **INDUSTRIE** and **PHANTASIE** (15/417) in that the models in the manuals owned by *Constructorama* are identical: the PHANTASIE Crane in 15/417 is Model 33 on p10, and the same model, but reversed right to left, is in the INDUSTRIE manual, again on p10, but it is No.24. Also the parts in it are held together by snap fasteners. Those are the only differences as far as the manuals are concerned, but the parts in the 2 systems aren't compatible, with a different hole size and pitch. [N&B are shown for INDUSTRIE in MCS and snap fasteners were used in an earlier period] (JB)

- **KONSTRUX** is larger than stated in OSN 15 and there were 5 sets called MIKROS, DEUTERON, MEGA, MAKROS, REX - Greek or Latin names all relating to size in some way. (JB)

- The French patent (No.707915) for **MAFELL** (15/415) was granted in 1930. A model is shown at the top of the next column. (JB)



- **MECANIC/MEKANIK**. The change of name occurred in 1949 when the system was still being made by Dörken & Mankel. (The company still exists under the name Dorma and is now a leading manufacturer of door closing systems.) According to information from the firm, production of constructional toys ceased in the mid 50s [a catalogue from 1957 is known] because of problems of distribution in the toy market. A manufacturer has to be listed by VEDES, the powerful organisation of German toy retailers, to be able to sell products nationwide. D&M, (and also the firm who made MIGNON) were apparently not on good terms with VEDES. As a matter of interest it is said that VEDES played an important role in the confiscation of Meccano's rights during WW1 and their sale to Märklin.

Sven continued that he has some 25 MECANIC/MEKANIK sets in his collection but not one made by Adrian & Rode, and so he would like to know more about their period. In a mid 50s Leaflet a new Gears Set is shown but was it ever introduced? The parts were included in Parts Lists (see 3/33) but he has never seen any of them. (SG)

- **MIKRON, ROSETTA, & PYTHAGORAS** were different names for the same system, and their parts may be wooden, but this isn't sure yet. (JB)

- On **MÖWE** (15/416) the original firm would have been Möninghoff & Weiß, the brand name coming from the first 2 letters of each. (DR)

Sven's **MÖWE** set is packed in a nickel plated box with a sliding lid and hazardous sharp edges. It measures 28.5\*8.3\*2.3cm and the lettering on it is stamped into the metal. Holes are 4.3mm Ø at 13.0mm pitch, and the Bolts are M4 with (unusually for German systems) square Nuts. Strips, Plates and Brackets are nickel plated steel of various thicknesses around 1mm. Pulleys have a brown finish like thin brass plating. [Sven kindly sent an 8h Strip and it is 13.2mm wide by 1.18mm thick, with 4.4mm Ø holes. Its end radius is 7mm. And in a photo of the Set can be seen a 12\*5h Perforated Plate, the Flat Sector Plate mentioned in OSN 15 (with straight ends and all holes parallel to them), and 2 of the STABIL-type Flanged Pulley Discs. The manual has landscape pages almost the size of the box, against the near A5 size of the page the model in OSN 15 was taken from.] (SG)

- The EMB4 **PLASTICON** set includes a motor and other electrical parts, with some plastic parts, and others of nickel plated steel. (JB)

- The parts shown in a photo of a **RECORD** Set include some short Strips and Brackets with semi-radiused ends,

**MECHANIX Abroad** This is the Indian MECHANIX set described in 15/409, but found on sale in the Spring by Ivor Ellard in a Clarke's cut-price store in Chelmsford at £16.99, and by Michael Grace in a number of toy shops in Co. Wicklow, Ireland last Xmas. Ivor kindly bought one for me and there are some changes since OSN 15, including a few extra parts, Pulleys with metal bosses, and a new manual. Michael's Set has these changes too.

The packaging is identical except for two additions to the lid - 'WINNER OF "THE BEST TOY OF THE YEAR" AND ALSO "THE BEST EDUCATIONAL TOY OF THE YEAR" (1994)'. Indian awards no doubt, and according to the manual, made at the TAITMA. Also an EEC label (with © 1997 on it), stuck over the maker's address, which looks to be the same, but the distributor is at MUMBAI - 400 086.

**PARTS** The contents have been increased by 4 Strips, 2 axles, 1 Angle Bracket, and 1 Spanner.

The **bosses** are nickel plated steel, peened almost flush with the face of the Wheel. They are double-tapped, 9.50mm o.d., and the bore of 4.11mm gives a reasonable running fit on the Axles.

**Flexible Plates** are still paper thin and now have a slightly rough matt finish instead of being glossy. The green & red ones are now a dark shade. (The other colour change is to the **Flat Girders** which are much lighter than before.)

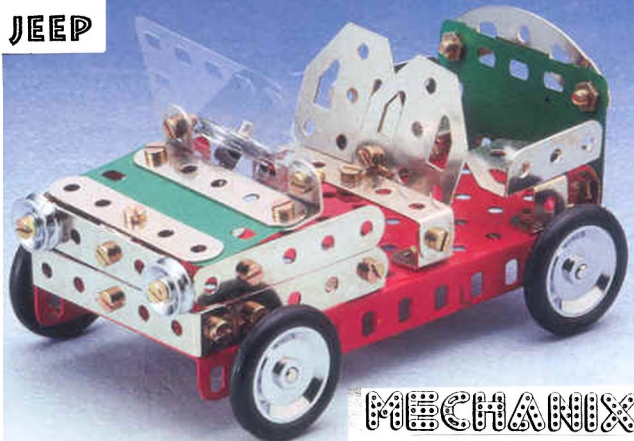
The **Nuts** are smaller at 7.2mm A/F and now fit the Spanner, except the centre opening which, as before, is square. The **Bolts** are cheeseheaded, 6.3mm Ø.

**Spring Clips** are now made of black plastic, and are slightly larger than before: 5mm wide with 4mm wings. The **Hook** is yellow plastic, 46mm long o/a, with a 5½mm hole. The **Driving Band** is of 3½mm Ø black rubber, with a length of about 9½".

The **Spanners** have a black metallic finish, and the **Screw-driver** is now marked MECHANIX & 453. (The 153 in OSN 15 should have read 453.)

**MANUAL** It has the same number of pages as before but they are larger, U.S. letter size, and there are over twice as many models, 31 in all. Each now has a Parts List, often illustrated, and all the parts in the models are in their correct colours. One or two very simple models have been dropped and others improved. The Robot for example is now the Robot with Pram. Several of the new ones use more of the parts in the Set, like a Fork Lift Truck & the Jeep below. There's quite a lot of chat about quality and it ends, 'We do not do business at Zephyr's we befriend children. A smile on your child's face is our gain. \\ love \\ ZEPHYR'.

**JEEP**



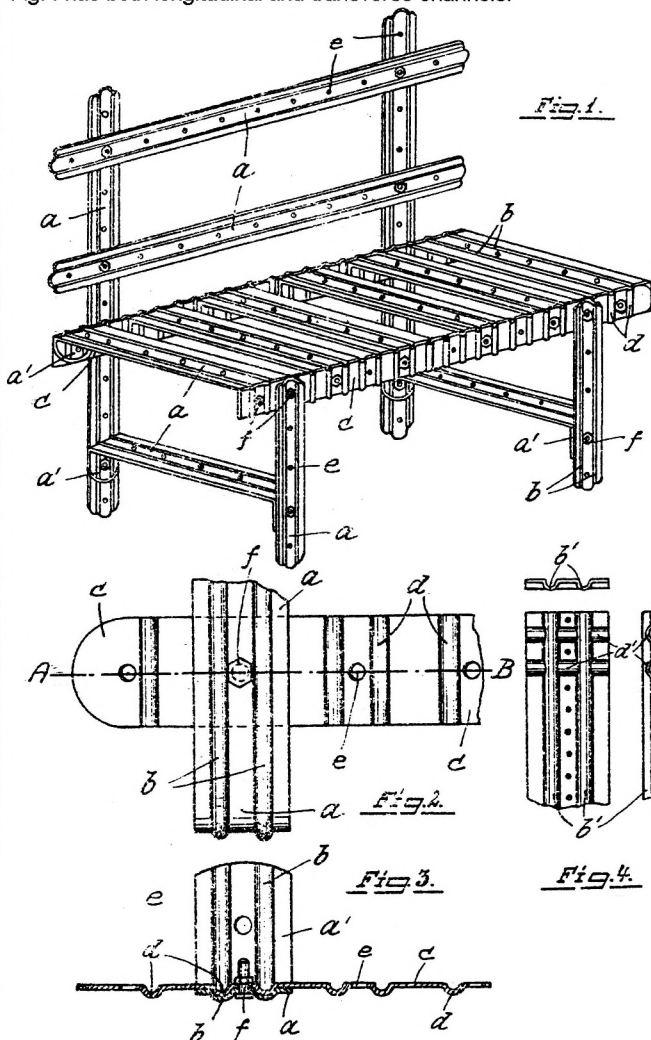
**MECHANIX**

# **SUMMARY**

•Name: MECHANIX •Maker: Zephyr, 195, Abdul Rehman street, 4 th floor, Gabajiwaia building, Mumbai - 400 003, India. •No Dates or Ref Nos: •Page size: 216\*281mm. •No. of pages: 16 unnumbered, including covers. •Language: English. •Printing: colour photos except B&W drgs of parts; cover is white with red left edge, & Helicopter model on blue ground. •Page Nos. of Illustrated Parts/Set Contents & highest PN: 16, W-1. •Sets covered: one, no number. •No. of models: 31. •Name, Page No. of first and last model: HELICOPTER,3; GARBAGE DUMPER,15. •Other notes: no Model Nos.

**The MAFELL Patent** MAFELL was the German system with very large parts, see 15/415 & 17/476. David Hobson has kindly passed me a copy of the relevant UK patent, No.353494 with a Convention Date of 23/12/29, in the name of Maschinenfabrik Fellbach G.m.b.H., Fellbach, Wurttemberg, Germany.

The claim relates to 'constructional toys, e.g. for producing small articles of furniture, small vehicles and the like'. They are to be made from strips, angle brackets, DAS, etc, which have impressed channels in them, some longitudinal, some transverse, which allow 2 pieces to positively engage with each other. Regularly spaced holes are provided for the bolts that hold the parts together, or for axles, and the bolt heads fit snugly between adjacent channels to prevent them turning. Fig.1 shows a finished model; in Fig.2 & 3 the N&B f holds the strips c & DAS a; and the strip in Fig.4 has both longitudinal and transverse channels.



In 1930 there was another patent, No.368758 for NER-SAG (1930) Ltd. and W.H.Ward, 448 Strand, London, which has considerable similarity to the Fellbach one, with engagement between the ribs and grooves, b and b', longitudinal and transverse, in the figures below. It was to build 'toy structures or vehicles, steps, ladders, trolleys, or other articles of utility'. The figures are self-explanatory except that the parts were to be joined by N&B through holes c, Fig.6 is a hinged element, and the holes l are said to be 'formed to reduce weight and to receive auxiliary attachment screws and bolts'.

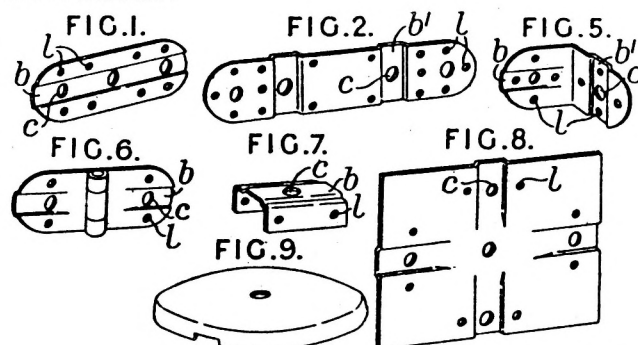




Fig.1



Fig.2

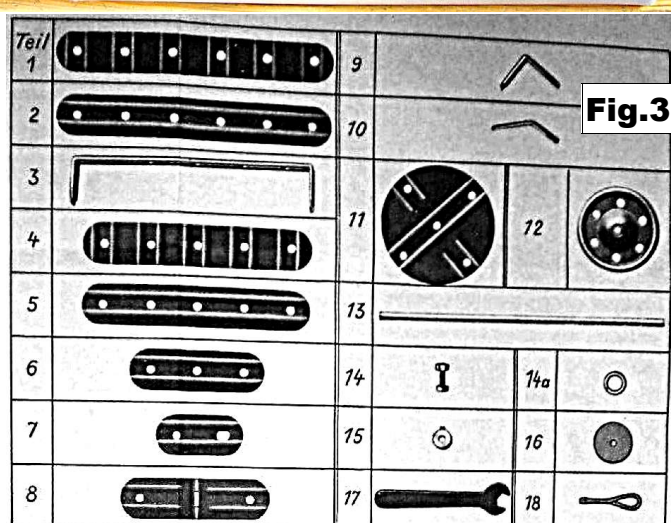


Fig.3

**Snippets. More on MAFELL** The name & maker of this 'child-size' 1930s German system were noted in 15/415, & details of the UK patent were given in 19/531. Now thanks to pages from a brochure & photos of sets kindly provided by Urs Flammer, more is known of MAFELL's 19 parts & 3 sets. Fig.1 above is the front of the brochure.

**The PARTS** See Fig.3. Their dimensions are given in the brochure (in mm) as follows. #1 365/55; #2 365/52; #3 315/52 65; #4 305/55; #5 305/52; #6 180 52; #7 117 52; #8 115/52; #9 65 62/65; #10 85/52/35; #11 160 Ø; #12 128 Ø; #13 10 Ø 420; #14 3/8"/20; #14a 14 Ø; #15 20 Ø/10; #16 95 Ø; #17 145/45/5; #18 100 32. For #14: the 3/8" is blurry and may be wrong; if 20 is a length, it looks from Fig.2 to be overall rather than under head, and if not a length it's interesting that the 3/8" BSF thread is 20 tpi.

These are substantial parts, Strip #1 for instance would be 365mm long, 55mm wide, & weighs 330g. Scaling from the dimensions given in the brochure: holes are about 10mm (the Axle is 10mm Ø) at 60mm pitch (or possibly a little more). Apart from some Strips, the Collar #15, & the Screwdriver, the parts can be seen in Figs.2, 4, & 5. #8 is a Hinge, as in Fig.2. Notice that Brackets 7, 9, & 10 actually have slotted holes. The ends of the Axle are grooved (Fig.2) and so could take a circlip, but the PL doesn't include one. #14a (in the N&B boxes) is probably a Washer, its bore looks too large to act as a circlip, and Collars are used on the Axles in the models in Fig.1. The thread of the Collar's tapped hole is smaller than that of the N&B.

**The SETS** Sets I, II, III, are shown in Figs.2, 4, & 5 but it's not clear which is which. All boxes measure 39\*26\*8cm, have the same lid (Fig.2), and weigh 5.9, 4.9, & 9kg. They were priced at 18, 20, & 22RM. I presume Set I in Fig.4 is the basic set (though it has been said to be Set III) and the others are add-ons.

**The MODELS** None of those seen (on the front of the brochure, on the manual cover (Fig.4), & the Push Chair in 17/476), use any other than the basic parts, in particular none include the Hinge & the circular parts #11 & 16. The models look to be robust but compared with some of the other child-size systems there are no Sledge Runners, no Pulleys to allow models such as a Windmill or Crane, and no parts to provide a drive to the Wheels of the 'Irish Mail'.

**The PATENTS** The German patent is 522306, dated 24/12/29; the French one 707915, application date 17/12/30. They are similar



Fig.4



Fig.5

in scope to the UK version in OSN 19 but the French one specifically mentions the possibility of wooden parts and has 2 extra figures showing a metal A/B attached to a wooden part. Also the model in it is similar in construction but narrower, a Chair rather than a Couch.

## A 'New' East German System: LEICHTMETALL

**BAUKASTEN** Thank you to Urs Flammer for sending photos & details of a set from what was no doubt an early post-WW2 system. Nothing is known of the maker and a manual has yet to be found.

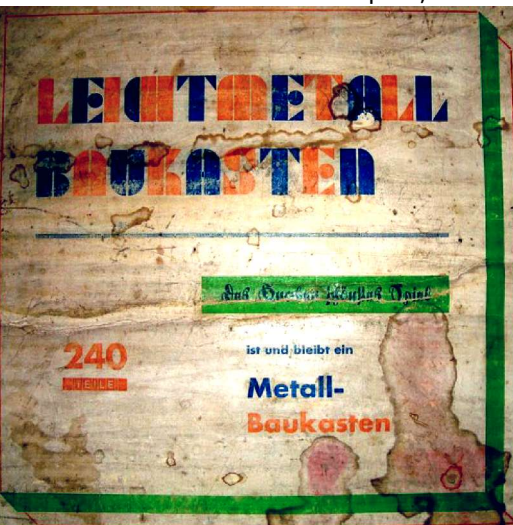
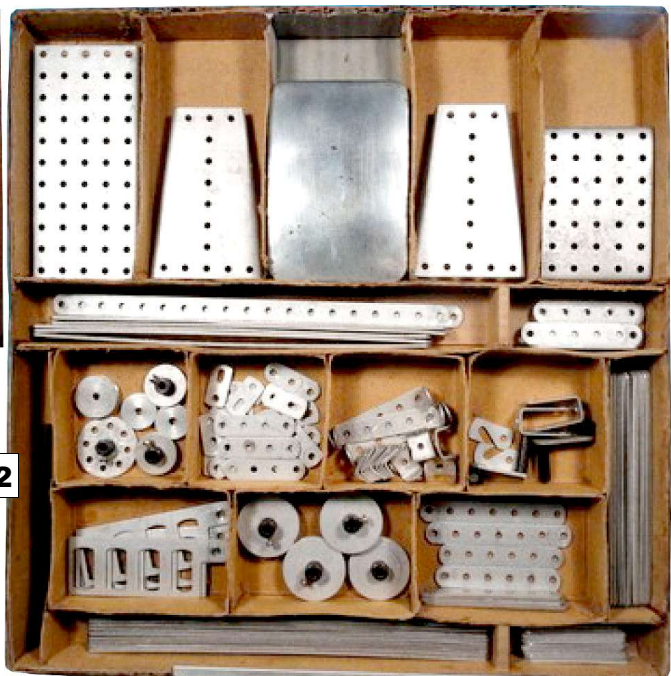
The box right, 38\*38\*4cm, is made of corrugated cardboard. Its label, below, claims 240 parts and carries the slogan, Des Knaben schönsten Spiel ist und bleibt der Metallbaukasten [Boys best play is and will remain the metal constructional set]. Its PR reads 'Dr 800 Stadtdruckerei Radeberg 11.48 Rg 259'. Radeberg is a small town about 20km northeast of Dresden. Notice the generous quantities of the longer Strips in the box right, particularly the 19h.

The 27 parts are aluminium except for a few steel items such as the N&B, bosses, & the unusual (hexagonal) Collar. Holes are 4.2-4.5mm at 12.7mm pitch, and Axles are 4mm Ø. The thread is

**Fig.1**

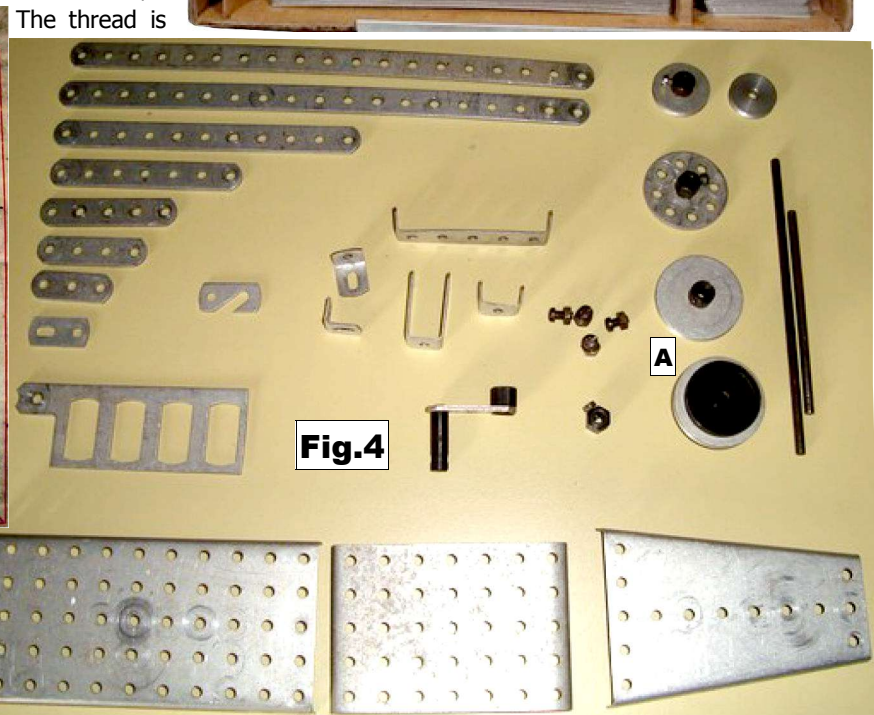


**Fig.2**



**Fig.3**

M4, but bosses etc are tapped M3. Nuts are hexagonal, & the Bolts look to have a pan or perhaps a round head. The Set Screw is cheese-headed. Strips are 2mm thick, bent parts 1 or 1½mm. 'A' in Fig.4 shows both faces of what appears to be a Flanged Pulley.



**Fig.4**

OSN 52/1591

LEICHTMETALL BAUKASTEN: S1

**More on MAFELL.** Further to the account on p1589 Jacques Pitrat kindly sent the following note.

I can answer some of your questions. I have a mint No.III set & several photos. My set is the actual one displayed in Fig.4, Set I is in Fig.5, Set II in Fig.2. The boxes are identical but the set number is glued onto one side of the lid.

In the single sheet (254\*355mm) brochure the N&B is definitely described as 3/8"/20, and 20 seems to be a length. Although not shown in the sheet, there are 2 lengths of Bolt: short 18 mm, & long 24mm. In both cases the depth of the hexagonal head is 5mm, the same as the Nut. Bolts are 18mm A/F; the Nut 17mm. The thread is 8.5mm (.33") diameter.

As the Bolt head is not slotted, one has to use the Spanner for both the Nut & Bolt. The Screwdriver is only necessary for the Grub Screw (part #15); its diameter is 6 mm.

The hole pitch is 62mm; the hole diameter 10mm.

The contents of Set III is: #1:4, #3:2, #12:4, #14 short:5, long:10, #15:4, #18:1.

The steel parts are very well made, the best I have seen in a child-size set. However, it does not seem that this system

was successful, and one probable reason concerns the models. No manual is known so far although on the back of the Sheet one was said to be included in each set (Fig.4 shows the front of the sheet, not a manual). However from the models known, one can imagine that the likely manual models for the individual sets, or even for all 3 sets, would not be very exciting. For example even the Bench on the box lid needs two No.I's. And consider the 3 models that are displayed in Fig.1. They are very simple, similar to some for Meccano's Set No.00 of the same period. One each of the 3 basic sets are not enough for any of them: each model needs 13 DAS. There are 2 DAS in Set III, 1 or 2 in Set II, & (from another photo) 6 in Set I. Therefore another Set I is needed: 4 sets, weighing together more than 25 kilos, are necessary to build any of these 3 simple models! Moreover, the sheet does not mention the possibility of buying separate parts. One must spend a lot of money to build some not very interesting models: the very high quality of the parts is not enough.

I also had the possibility of buying Sets I & II. I did not do so: too heavy, too costly, and not original enough.'

OSN 52/1591

MAFELL: S2