an 8-hole Wheel Disc, and the 2 Spanners with square tails shown below (enlarged), along with the top of the box lid (opposite). (JB)

• The parts in the **SACHSENMEISTER** theme sets (15/418) have only very limited compatibility with the ordinary parts. (JB)

• The parts in a photo of a **SCHWERKA** Set include the Windmill Sails illustrated in OSN 15, though they don't look black. (JB)

• On **TECHNOFIX** the parts are steel, brass plated, the holes are 3.5mm Ø, and the arms shown in Fig.5 can pivot independently. (JB)

• On **WEMA**, Nebenzweig is not a town, it means 'sideline' and thus constructional toys were only a sideline activity for the firm Eberspächer from 1946 to 1948. (They made and still make, heaters for cars.) (SG)

• The early 30s catalogue that listed ALPHA also includes **ZICK-ZACK** with as an illustration the box below. The WK logo (by Nr.) shows it to be from the Wilhelm Krauss period, and the main thing is the unusual hole pattern in the Strips. 3 sets are listed with 40, 80 and 147 parts. The largest one cost 18 Marks a dozen, against 66 a dozen for the ALPHA set with 150 parts, so it would have been aimed at the cheap end of the market. (SG)

The 'NEW' GERMAN NAMES

• **ANDERS**, blue and orange parts without many holes in them, and so not very adaptable. (JB)

• **BAUE SELBST**, from the 1930s with special parts for Cranes. (SG)

• **BOSCH**, MECCANO-type parts, painted black. A photo shows a wooden box with a sliding lid. The label on it is similar to the manual cover reproduced opposite. (JB)

• **COMBINATOR**, 1930, parts to make buildings. (JB)

• **CONRAD**, wooden parts but metal Brackets, Axles, and Wheels. (JB)

• **DUX Railway Sets**. (SG)

• **FRI-DIE**, a simple system with red and blue painted steel parts, and holes spaced at markedly more than ½". [It is probable that this is the FRI-BIE of 11/291; other mistakes in that list: KOHLER should be KOBLER, and WESFALIA, WESTFALIA.] (JB)

• **GECO**, preceded CONRAD and is identical to it. (JB)

• **GESCHA**, a simple system from the late 1940s, with an unusual hole alignment. (SG)

• **HEIKO**, MECCANO-type parts but only a limited number of simple ones. (JB)

• **INGENIO**, pierced or perforated sheet steel parts painted white, red or black, which slot one into the other to make Dolls' Furniture, parts of Buildings, and also Trains. (JB)

• **KOSMOS MASCHINEN**, from the 1930s, with semi-specialised parts to make machines. [Perhaps from makers of TECHNOFIX?] (JB)

• **MAGNETO**, heavy steel parts, with Wheels & Axles. (JB)

• **METALLIX**, from the 1950s, with MECCANO-style steel and natural aluminium parts. (JB)

• **RIAG Modelbau**, another simple system from the late 40s, with a hole pattern like that of ZICK-ZACK above. (SG)

• **ROCO**, possibly from the 1950s, & based on Rods. (JB)

• **UNSERE TAKTSTRASSE**, an East German theme set to make 2 different Tractors with mainly special parts. (SG)

• **WERNER'S Metallbaukasten**, an early postwar copy of TRIX. (SG)

An EGB-ELEKTRO Outfit Well actually most of the parts from one that Richard Symonds came across last year in Canada (for $5). He kindly sent a photo of the parts and as examples, a 3h Strip and a N&B. The Set is thought to be from the 1950s and is shown in MCS as ELEKTRO-BAUKASTEN. EGB was the name of the East German maker from Leipzig, and as well as this EM (Electro-Magnetism) Set, 3 others are noted in MCS - the M (Magnetism), RE (Static Electricity), and CE (Electro-Chemistry) - but no details are given.

The main parts of the EM Set are 2 8*14h Flanged Plates, various Strips and special Brackets, a ready-wound Coil and motor Armature, a Horseshoe and 2 Cylindrical Magnets, and a Bell. All the parts are shown in MCS but the following details can now be added.

• **DATA** (in mm) STRIP (3-hole): •hole pitch/dia, 10.0/4.2; •width, 10.0; thickness, .86; •ends fully radiused. [No bosses] THREAD: M3 [No Axles or Gears] NUT: hex 5.6 A/F; BOLT: tapered cheesehead 5.0 Ø; both nickeled steel.

• The **Flanged Plate** is moulded from dark brown plastic and has no holes in the flanges. The holes in the top look much smaller than those in the Strips.

• The 3 & 9h **Strips** are aluminium and have little material outside the end holes, so the 3h one is less than 28mm o/a. The 6h Strips look to be dark brown plastic.

• The **Trunnion** appears to be aluminium, and the long centre slot looks much longer than in the MCS illustration.

• Most of the other **Brackets** look as if they are nickel but some may be aluminium.

• The base and switch handle of the **Switch** #8 look to be red fibre, and the fittings, nickel.

• The **Coil** is about 20mm wide and its top and bottom are brown plastic. The **Armature** is about 10cm long o/a.

• The top contact part of #12 (**Contact Strip**?), and the **Brushes** #18 are copper.

• The **N&B** are in a flat square box that may be made of brown plastic. It's about 4*4cm with a hinged lid, and may be a substitute for the #21 shown in MCS. In Richard's parts the **Container** #22 (with Iron Filings in it I think) is a clear phial with stopper.

• The flat **Plates** #29 & 30 are red - plastic no doubt.

• The **Pointers** #31 & 32 are about 6cm long. #31 looks at first glance like light yellowy-brown wood, but is probably plastic; #32 is aluminium.

• Part 33 (**Nägel**, but I can't think of a suitable English word), looks aluminium, and is some 5cm long with a small hole in the 10mm long by 5mm wide spade end.

• The **Bell** is nickel and about 8cm diameter.

• What may be #35 (**Disc**?) is black and about 2cm Ø. **Axle** #36 is a brass looking Threaded Rod, 5cm long.

• There are 4 lots of **Wire** on the card former of #41, and the wording on it is Kupferdraht 0,10mm Ø; Kupferdraht 0,30mm Ø; Eisendraht 0,30mm Ø; Heizdraht 0,12mm Ø.

• The **Bolts** are 6mm u/h, and 2 longer ones can be seen, one 15 and the other 18mm long. Their (neat) heads are 2.0mm deep. The (machined) **Nuts** are 2.3mm thick.

• There are 2 identical nickel **Spanners** which look like the one in MCS and are about 8cm long. The **Screwdriver** is perhaps 16cm o/a and has a long, round wooden handle.

Richard wrote that parts 13,14,15,19,20,27 & 40 are missing from the Set, and I can't see 23,26,38,39 & 42-46 either.

A Fri-Die-Metallbaukasten

by Jacques Pitrat

FRI-DIE was mentioned in 17/477 and Baukästen has a picture of a set on p218. It is a German system and the name appears to come from the first letters of its maker's names: Fritz Diestelkamp, Gütersloher Strasse 27, Brackwede, i.W. Brackwede is a small town in Westfalen and "i.W." probably stands for "in Westfalen".

There is no indication of date and none of the models could have existed only after WW2. Baukästen has '1920s' but with a question mark, and the 1930s or post-WW2 seems more likely.

The **box** of my set is plain cardboard, 21*17cm, with the lid right. Inside it is partitioned by 6 trays, 3 rectangular & 3 smaller square ones along the bottom. The Baukästen box is basically the same but not so rough: the lid is red with a label which covers nearly all the top and shows the same 6 models. It is likely that there was only one size of outfit - mine is not numbered, there is no mention of any others, and the various parts match those in the Baukästen set. There is no parts list & as my set is certainly incomplete no quantities will be given.

The different **parts** from my set are shown below. In addition a 10h Flat Girder & 2 shorter Threaded Rods can be seen in the models, and in Baukästen. Most of the holes are 3.8mm Ø but those in the Wheel & Pulley Discs, and the centre holes in the 4h long Angle & Flat Girders are 3.0mm. No holes are elongated. The hole pitch is 15.5 mm. The thread is 3mm Ø.

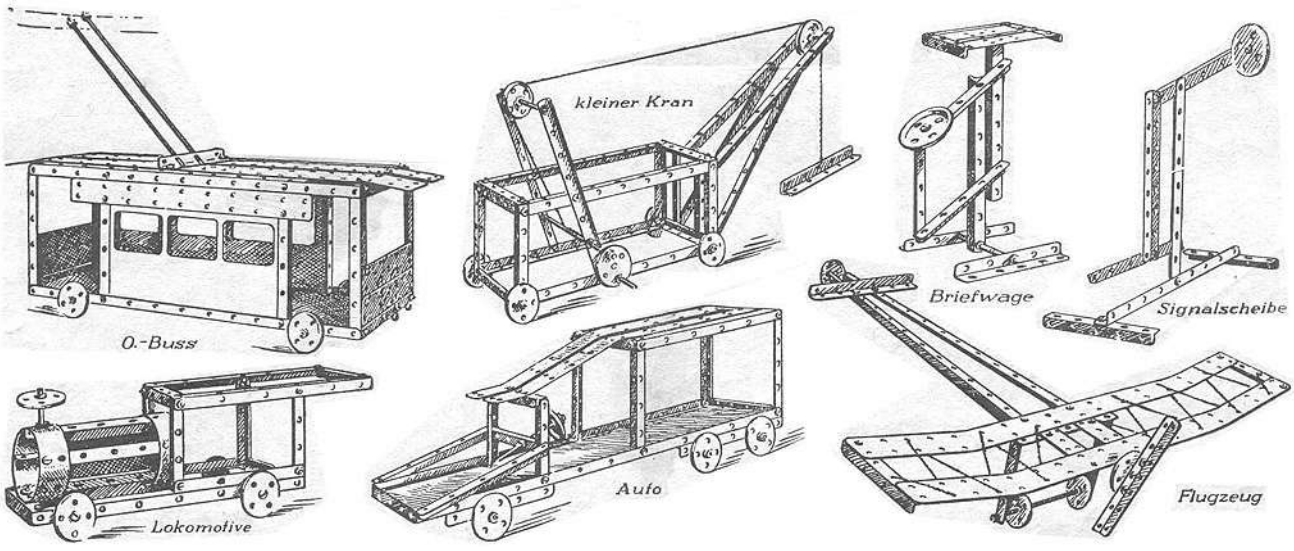
The main parts are the 4, 5, 6 & 10h **A/Gs**. The 4h with the smaller centre hole (not in line with the others) is used as a bearing in the Windmill model. There are many 5h A/Gs, with 39 still in my outfit. ● The **Hook**, oddly, does not appear in any of the models, not even in the two Cranes. ● The **Wheel Disc** is 26 mm Ø, & the **Pulley Disc** 25mm Ø. ● The one remaining **Threaded Rod** is 117 mm long. In some models the shortest Rod is used as a Threaded Pin, fitted to a Wheel Disc. ● The **N&B** are nickeled steel. There are two sizes of Bolt: the RH is 9mm & the CH 6mm u/h. The Nut is 6mm A/F & 2.5 mm thick. ● The two tools are a **Screwdriver** , 14cm long o/a, with a wooden handle, and a **Spanner**, length 8cm.

The parts are steel and well made except that the small hole in the Girders is often too small for the Bolts or Rods. They have a blackened finish but the same parts in Baukästen are painted red, pinky-red, or blue.

The **model sheet** is 207x297cm. The front has the maker's name & address, and the same 6 models as on the lid. The reverse has 10 models from Strassenbahn (Tramcar) top left, to Signalscheibe (Railway Disc Signal) bottom right. 6 of these are shown below about ⅔ f-s. The pictures of the models are poorly drawn: the 5h A/Gs are often shown with only 3 holes, especially in the models on the lid. Also it is not easy to find where an A/G begins when more than one are in the same line, and many details are not clear, for instance how the ramp of the Bridge is tied to the platform. The lid models have what look like wooden Wheels, and so perhaps they were used in a first phase, or it was intended to use them when the models in question were drawn.

The major **drawback** of this system is that there are no Strips, and the models often have an unpleasing look because the sides of the A/Gs protrude. Moreover, as the Girders have no elongated holes it is not always easy to make the necessary adjustments, though minor adjustments are possible because the holes are larger than the diameter of the Bolts.

Presumably one reason for the use of the A/G as the main structural element was to avoid the need for A/Bs &/or DAS. It would also give relatively strong frameworks but there are obvious disadvantages and these, combined with the system's poor design in other ways, make it a little surprising that FRI-DIE lasted long enough to go through 2 phases, one with a rough box & black parts, and one with a well-made box & coloured parts.



the Collars. The **Spring Clip** has narrowed wings but is of soft steel with little grip. **Finish** The A/G, DAS, & most Strips are dark green but the 25h is slightly lighter. The Sector Plate matches the Windmill Sail but both have probably been repainted. So originally they may have matched the Flanged Pulley. Brackets are painted black.

The EBAY SETS The Flanged Disc Pulleys in all of the sets look to be painted silver. The only Bush Wheel in them is red. In all the sets save the No.2 the red parts are a lightish shade. 3 have bluish-green parts similar to the prewar MÄRKLIN shade, one has dark green parts as in my sets, and one has a mix of the 2 colours. In the one set other than the No.2 with a Windmill Sail, it has rectangular cutouts, but there are parts from several other systems in the box. The set with the mix of green parts has a Sector Plate with only a single row of lengthways holes.

The MANUALS The Price List includes manuals 0-1, 0-2 & 0-4. The known covers are similar to the Fig.1 label. Otherwise nothing is known of them except that the illustrated parts & drawings of the models in the few pages seen are identical to those in prewar MÄRKLIN manuals, from the early 1920s in some cases.

The MÄRKLIN CONNECTION The parts in the sets to hand look like MÄRKLIN but, quite apart from their finish, none exactly match the German parts, and while adequate, none match their quality. It has been said that SCIENTIFIC existed prewar and there is no very good reason to think otherwise. However when MCS talks of the 1920s one may wonder because Märklin did not introduce coloured parts until around 1929. The use of the Märklin models and their distinctive shade of green paint would have almost certainly meant a Märklin connection but whether the parts came from Germany or were made under licence remains to be seen.

One puzzle though. If SCIENTIFIC was introduced in the 1930s with Märklin's blessing why would an early 1920s Illustrated Parts be used in at least one manual? And could that early pattern Sector Plate seen in one Ebay set be genuine?

The parts in my sets would no doubt have been made in Holland after the war, either before Märklin got on its feet again or with their agreement. (The latter was presumable the case for the postwar Austrian METEOR which used MÄRKLIN models in its manuals, see 12/302.)

The argument that SCIENTIFIC was only postwar is more difficult. One could imagine a small system based on MÄRKLIN being launched soon after the war with models taken from whatever manuals were to hand but why would the change from the MÄRKLIN green to dark green have been made? If Märklin didn't object to their models being copied they would hardly baulk at the use of 'their' colour. Or was the change of colour the other way round, and if so why? To make the parts look more attractive perhaps but I'm not convinced. It would be interesting to know if the parts in the sets with bluish-green parts are like those described here or if they are exactly like MÄRKLIN.

POSTSCRIPT A No.1A seen on Marktplaats has silver Flanged Disc Pulleys, Strips etc in prewar MÄRKLIN green, MÄRKLIN pattern (ie with rectangular cutouts), lightish red Windmill Sails, and brass looking Flanged Pulleys with 4 face holes. It was said to be complete and to perhaps be from the 1950s. Another, also said to perhaps date from the 1950s, is the same except that the Flanged Disc Pulleys are blue and the DAS a lightish green.

Snippets. More on FRI-DIE Since Jacques Pitrat's description of his set in 35/1048, 4 other sets have been seen on Ebay, including one with coloured parts.

Fig.1

2 sets have identical boxes to Jacques' & they have the same range of parts too, all black except lighter Wheel Discs (Jacques' were also lighter but it doesn't show in the OSN 35 photo). Both these sets have more parts than Jacques' & one has over 50 A/Gs. Of the other parts it is likely that Sets should have 2 Hooks, 4 each of the Wheel & Pulley Discs, and possibly 1 or 2 Flat Girders. One set has the OSN 35 Model Leaflet; the other doesn't have one.

One of the other 2 sets one has the same box but it contains some additional different types of part (Fig.1) as follows. • 2x 3*3h Flanged Plates, a long Flat Plate, & a Wire Screwdriver, all in the righthand tray. • 9h Flat Girders and 2 bright Strips, probably 3 & 8h long, in the neighbouring bay. • A bright part in the top left bay which may be a Disc appreciably larger than the Wheel Disc. Also in this bay a Pulley Disc with 4 peripheral holes, and another can be seen in the adjoining long bay. There was no Model Sheet with this set.

The fourth set is shown in Fig.2 and has the same size box as the others. Its lid is red with the same label nearly covering it, identical to the set with coloured parts on p218 in Baukästen. For reference the types of parts in this last set look like Jacques' except that it has 9h as well as 4h long Flat Girders, & its Screwdriver has a much shorter blade. The length of the Flat Girders in the Fig.2 set can't be seen. New parts in the Set, assuming they are original, are the Tyres & the 2*2h yellow Plate in the bottom tray. At a glance I wondered if the latter was a backing card but on closer inspection it is probably flanged & looks about the size of the 3* 3h in the Fig.1 set. And I suppose that the hole that can be seen between it and the parts to its left is in the bottom of the tray and not in a light coloured Flat Plate. As in the Fig.1 set the red Pulley Discs have the ring of 4 holes.

Fig.2

It isn't clear if it is a Leaflet or a Manual above the Set. The Bus on its front is a model on the reverse side of the OSN 35 Model Leaflet (which I omitted by mistake from the models shown in OSN 35). The PR was given as 754/500 11 48 KL.1, so a 1948 or 1954 date is possible – 1948 is at the end of FRI-DIE's mooted period. Richard Lüking G.m.b.H of Brackwede was also mentioned, a different name to the one in OSN 35, so possibly the printer.