

THIS NEWSLETTER IS SUPPLIED ON THE UNDERSTANDING THAT IT IS FOR THE PERSONAL USE OF THE RECIPIENT FOR RESEARCH PURPOSES ONLY

EDITORIAL Distribution of OSN pages by PDF seems to have gone well with no problems reported, and I'm glad to say that more than half OSN subscribers now use this method. So, if you were/are in two minds about it, give it a try, you can always revert to the printed version, and if you do your PDF sub will be credited to you.

Several PDF subscribers have asked why the first 2 pages, 1452-3, of OSN 48 appeared last. I should have explained earlier that they would not be sent until the printed version was finalised. This to allow the printed & PDF versions to be the same, and to allow any late items to be included.

Shorter NOTES, with thanks to all contributors.

1. MÄRKLIN's Early Days Urs Flammer sent a copy of a pink flyer that he found in a MÄRKLIN manual. Its date isn't certain, the manual was dated 21.3 but the logo on the flyer, right, is thought not to have been used until 1922. Urs' son Patrik kindly translated the flyer for me. It is headed 'MÄRKLIN instead of MECCANO' and starts by saying that the construction sets our company is currently producing under the trade name MECCANO will from now on be available as Metallbaukasten MÄRKLIN, and that all parts in the MÄRKLIN sets are compatible with Meccano parts and can be used in combination. It goes on to say that MÄRKLIN sets will contain a larger and better selection of parts and that is the reason for the change of name, 'to distinguish them from the old MECCANO sets'. Finally that Märklin vouches for the quality & versatility of new sets and that they are a purely German product with all the parts produced by 'German hands' in Märklin factories. And that all aspects of the product are Märklin's property and are covered by patents etc.



MÄRKLIN: S4

[48/1452]

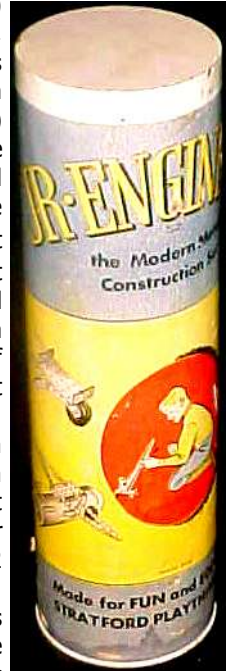
2. Snippet. 'New' System: LA MECCANICA APPLICATA. The manual below, said to be from the 1930s, was offered on Italian Ebay. As can be seen it carries a logo, 'MOGO'. I suppose it is for Set 4-5, and the model looks to be made from MECCANO-style parts.



LA MECCANICA APPLICATA: S1

[48/1452]

3. Snippet. Another JR ENGINEER Set. Unlike other known JR sets (see 43/1293 & earlier) this one is packed in a cannister (right), 9" high & 2½" Ø. The different parts which were shown with it are as those in the Special outfit (described in 33/976) but do not include the C/W Motor, the Disc, the Wheel Disc, the Perforated Plate, the Crank Handle, the Collar, & the 13mm Bolt. The Flanged Plate is not painted. One other part looks as if it might be a small gear wheel on a small diameter spindle: it could be part of a C/W motor, but it doesn't match any of the parts in the Motor in the Special set (see 33/976).



The quantities of the main parts shown were 1 Flanged Plate, 6 each of 5 & 12h Strips, 2 DAS, 2 Curved Strips, 4 at least of the A/B, 1 at least of each of the other 3 types of Bracket, 4 Road Wheels, 2 Axles, & a Screwdriver.

No manual was shown and the models on the cannister are not in either of the known manuals. The cannister itself was probably used in some of the models because it was said that 6 spots on it were marked 'punch here', and it could be seen that this had been done.

The maker of this set was Stratford Playthings Inc. and the 'indecipherable' name above 'Playthings Inc.' of the front of the Special manual (see 43/1293) can now be seen to be 'Stratford'.

JR ENGINEER: S6

[48/1452]

4. AMI-LAC Update The firm's website, www.lacgiocattoli.it, now shows only 5 small sets with none of the basic outfits which were still on offer in 2007 (38/1151). The largest set is the 2000/1 with 219 parts to build any one of 5 vehicles, see 25/727.

Of the other sets, three, 107-109, were described in OSN 38, and the other, No. 106 with 127 parts, is for

another of the models that can be made from the 2000/1 outfit, the Scooter above. All 4 sets are packed in same type of plastic case shown right.

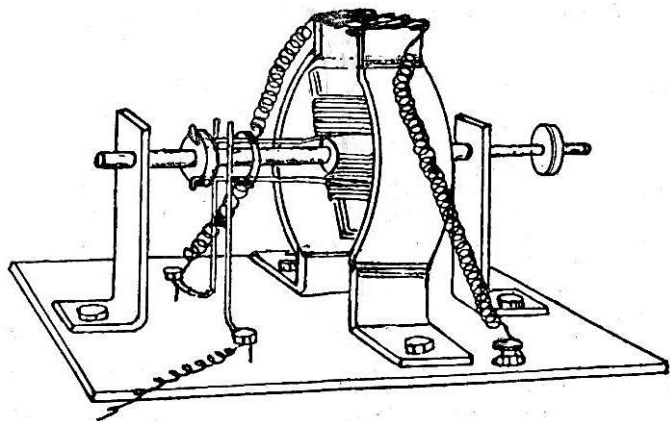
The same 3 models as in 2007 are shown as Novità but again with no indication as to whether there are sets for them.



AMI-LAC: S4

[48/1452]

5. **INNOR** Jean-Pierre Guibert kindly sent a copy of a new page recently added to his *Encyclopédie*. It gives details of a French set from the 1950s with 10 different parts to construct the simple 4-9v Electric Motor below. It is referred to in the



Instructions as the MOTEUR INNOR, but nothing is known of the maker. The base is the lid of the cardboard box (13*8*1.3cm), which has a plan view drawing of the Motor on it, but no name, and is perforated with holes to suit the parts. The Shaft is 2mm Ø reducing to 1.5mm at one end. The discs for the commutator are cardboard, the pulley brass, as also the 2mm Ø N&B. The Rotor had to be wound with 34 turns on each arm, & the Stator with 50. The paperwork in the Set consisted of a sheet printed on both sides with detailed building instructions and 2 other sheets, one with extra advice, the other about series & other motors, a permanent set-up for the Motor, and making a strobe disc to mount on the Motor.

INNOR: S1

[48/1453]

6. **MASTERBUILDER** In the account of this early post-WW2 UK system in 38/1135 it was mentioned that the meaning of the 'K.W.' in the name of the MASTERBUILDER company wasn't known. The answer is Kathleen Waddell, the wife of the Wardlaw Walter Waddell, the man who designed the system.

This information from Robin Waddell, Walter's son, who played with MASTERBUILDER as a small child in the 1946-50 period, and has recently been in touch. He added that Walter and his brother Alexander (Sandy) were joint owners of K.W. Products, the company based in Mountsorrel, just outside Loughborough, responsible for MASTERBUILDER.

And Robin wrote something of Walter's history. He combined considerable technical ability with a capacity for hard work, and he had a varied career. As an apprentice with Ruston & Hornsby in Lincoln he looked after the agricultural machinery, steam engines, etc which the company showed at fairs & exhibitions, and later, in the mid-1930s, he was sent to Trinidad as a support engineer for the equipment that Rustons had sold out there. Back in England he was involved in designing the tracks for the Centurion tank towards the end of WW2, and after the war he worked full-time for several companies as well as his involvement with MASTERBUILDER. Some years after that period he started another business, a direct mail bureau, initially called Miss Kay Blunt after his wife's maiden name, and later Powertyping. It used paper-tape technology to integrate addresses, letter text and personalised text inserts from three separate tape readers connected to

Flexowriter automatic typewriters - an awesome sight in operation. The letters were then signed with a genuine fountain pen by another automatic gadget.

MASTERBUILDER: S3

[48/1453]

7. **TRIX** Timothy Edwards passed on the address, www.trix-metaal.nl/Index.htm an excellent site with many photos of sets, motors, manuals, brochures, etc from Germany, France and several other countries.

TRIX: S7

[48/1453]

8. **'NEW' SYSTEMS** Jeannot Buteux/Constructorama wrote that it was hoped in due course to send some/more information about systems such as BOMISA, IMBRICA, MÉTAL-LUX, K.DO, STRUCTEX etc.

New OS Names: S2

[48/1453]

9. **Snippet: Canadian JUNEERO** A manual was described in 11/283 and now the set below, a 'Model A', has been seen on Canadian Ebay. It was said to have been produced from 1940 to 1948 by Steelmaster of Vancouver, and to have a British-made Tool plus aluminium & steel parts. The box is 18*12*2 1/2" and a sheet pasted inside the lid shows the 6 operations that the Tool can perform. The parts visible in the box include



a pair of Shears to the right of the 4 small brass Pulleys, a Die above the Tool's wooden Base, & to the right of the Tool's red handle, the Span'driver shown in OSN 11. Under the Manual is Sheet material with a Corrugated Sheet on top. There is no sign of the larger Pulleys & Flanged Wheels needed for some of the Manual models. But the ready availability of extra parts was stressed on the inside of the lid and in the Manual.

JUNEERO [2]: S1

[48/1453]

SMALL AD Wanted A manual, or a copy of one, for the German ELECTRIC Synchronos Uhr (Clock). Please contact Urs Flammer at urs.flammer@gmail.com.

OSN Subscription Rates, Printed Version The price per Issue, including postage is £6.50 for UK; £8 by air to Europe & surface anywhere; £9 by air outside Europe. **Back Issues** For the zones above : OSN 1: £1.50/£4/£5; OSN 2,3: £3.50/£5.50/£6.50 each; OSN 4-27: £5/£7/£8.50 each; OSN 28 on: £7/£8.50/£9.50. (All colour & some B&W issues are on loose sheets.) Postage at cost on multiple orders.

OSN Subscription Rate, PDF Version From No.48 onwards OSN is also available as PDF files sent to subscribers as they become available as email attachments. Their content is identical to the printed version. The cost is £5 per 2 Issues.

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 (but repeats may not always be possible, please ask). Ads are sent by email to PDF subscribers.

SUBS: OSN Printed Version
Your Credit Balance:

was £ after OSN 47

was £ after your remittance of £

is £ after this Issue

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

SUBS: OSN PDF Subscribers:

If needed you will be sent a renewal reminder by email.

More GNOM Sets. 3 sets were described in 34/1005 and since then a number of others have been seen on Ebay. Also Jean-Pierre Guibert has kindly sent details of his outfit.

First the RiMü Sets described in OSN 34. A larger set on Ebay is probably the same size as the yellow-lidded one mentioned in OSN 34 but has a whitish lid with the same OSN 34 graphics in its centre. The maker is given on the first page of its manual as Riebold & Müller of Schalkesmühle, a town in Westphalia 25km east of Wuppertal.

A few of the parts in the set are recognisable from those described in OSN 34 but the rest are obvious foreigners. The manual pages below though show some points of interest.

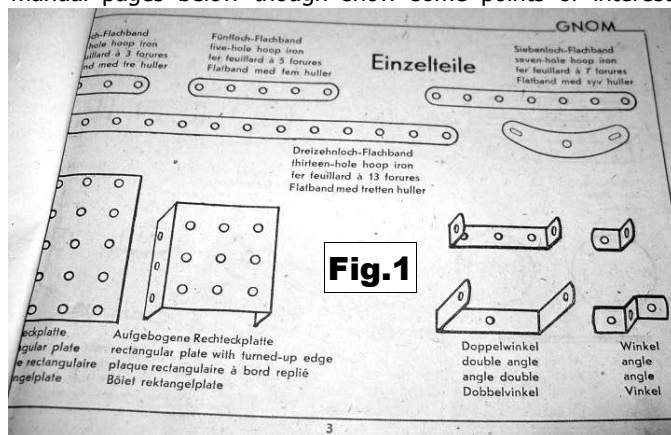


Fig.1

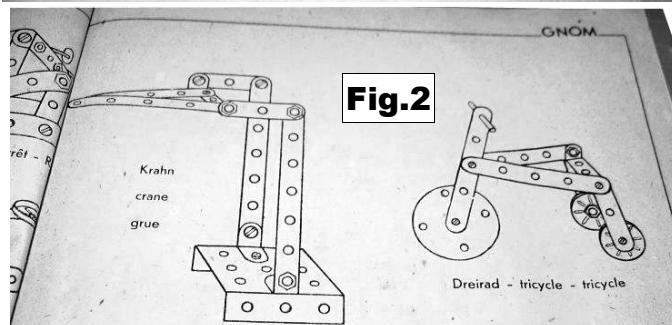


Fig.2

Parts in the Illustrated Parts not mentioned before are the 3 & 13h Strips, what appears to be a Curved or Formed Strip, the 2 DAS, the Reversed A/B, and the Rectangular Perforated Plate, 5*7h. No doubt other parts were shown on another page. The 2 models (on p9) show the 4h Disc & 8-'spoked' Wheel (or Pulley) which were in the *Baukästen* set.

The Set's manual cover is as OSN 34 but is brown in colour. In fact the covers are a wrapper with the inside pages held by 2 paper clips. As can be seen the pages above are in English & French as well as German, but the Introduction, which fills an unnumbered page, probably Page 1, is only in German.

The 'Lorry & Crane' Lidded Set All the OSN 34 sets had the Rimü logo on their lids & manual



Fig.3

covers but no logo can be seen on the set above & right. The parts though, except the rectangular Flat Plate (in the righthand bay), are as previously seen.

This is Jean-Pierre's set and he sent the following details. The box, 25.2*13.6*1.7cm, contains the 12 different types of parts in Fig.5, all bright steel. Holes are 3.2mm at 18.0mm pitch, and the thread is M3. Strip parts are 10mm wide & .74mm thick. As found

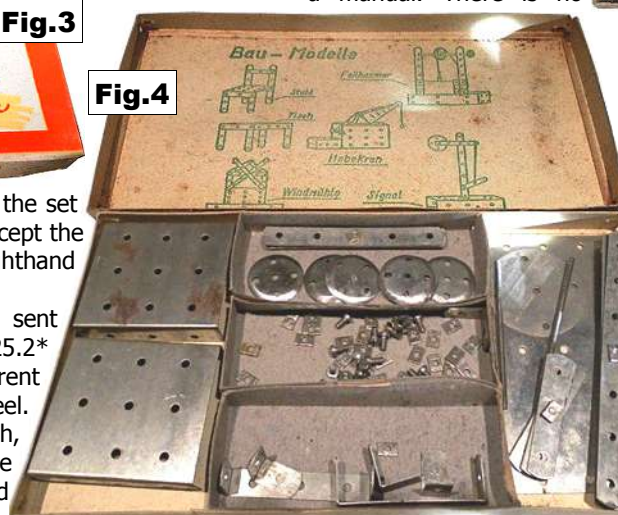


Fig.4

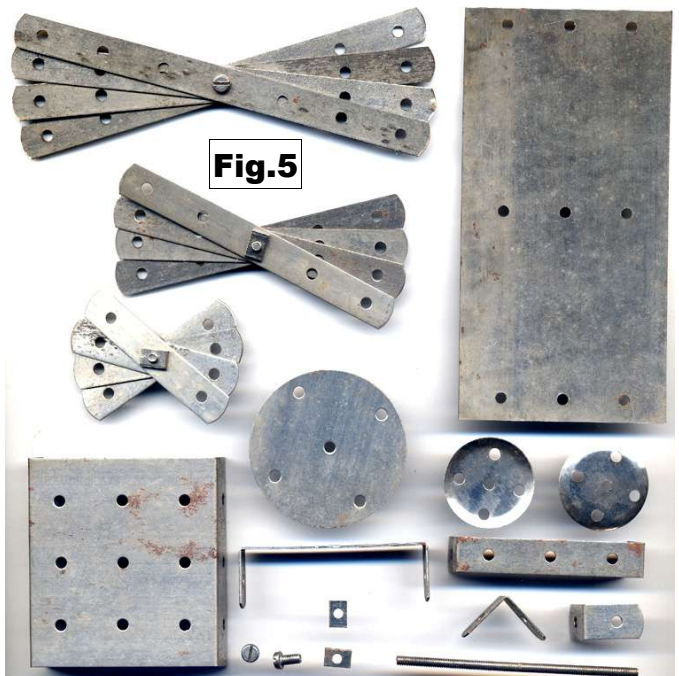


Fig.5

the contents were 4 each of the 3,5,7h Strips; 2 DAS; 4 A/Bs, 17*17mm; 2 Flanged Plates, 60*53*12.5mm, & 1 Flat Plate, 60*118mm, each .51mm thick; 1x 45mm Ø Disc, .55mm thick, & 8x 26mm Pulley Discs, .25mm thick (possibly suitable for the Tyre in OSN 34); 2x 7cm Screwed Rods; 23 Bolts, 7¾mm long o/a with 5.2mm Ø heads; & 17 rectangular Nuts, 5.3*7.7*1.5mm (lengthened to give a better grip presumably).

6 models are shown in the Set's lid and no manual was with J-P's set or with another similar outfit seen on Ebay.

The 'Single Gnome' Lidded Set (below). 2 such

Fig.6

sets have been seen on Ebay, one said to measure 17*13cm, the other 15*12cm. Again there is no logo & the slogan on the lid, 'das kleine Bauwunder' is different. The Nuts are again rectangular, while the Wheels are as in the *Baukästen* set. One end of a Spanner can be seen in both sets. The models are on a single sheet.

Comment Apart from the absence of the logo the 'new' sets differ from the RiMü ones in not having any bossed parts or Tyres, & in not having a manual. There is no

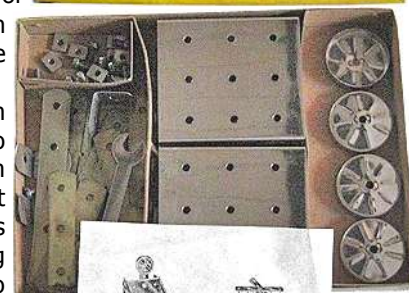


Fig.7

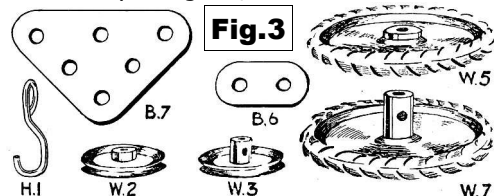
certain indication as to which came first, or if there were ever larger non-RiMü outfits. Possibly the 'new' sets were the early ones and RiMü developed the system, or alternatively the system was simplified after the RiMü phase.

PREMIER Update Notes on Sets 1 & 2, plus an outline of the parts, were given in 18/505 & 21/602. Since then a few sets have been seen on Ebay and David Hobson has kindly sent details of his No.3 outfit, unused & still strung. What follows also includes a recap of some of the earlier material.

THE PARTS The range, with my MECCANO-style names: S1-5 Strips 3,5,9,13,21h. A1,2 A/G 11,21h. C1-4: D/B; DAS 1*3h, 5,9*1h. B1-5 A/B: 2*2h; 2*1h; 1*1h; Rev. 2*1*1h. B6 Fish-plate (shown as 2h Strip). B7 Corner Bracket 3*3h. B8,12,10, 11 L-Girder: 1*2*5,3h; 1*3*11,5h. F1-5 'Flexible' Plates: 3*5, 11h; 5*11,5h; 5*5h Curved. P1,1a Flanged Sector Plates 4,11h long. P2,2a,3,3a,3b,3c Flanged Plates 5*11,5,3h, 3*11h, 7*9, 5h. P4,5,6,7 Perf. Plates 11*7,5h, 7*5,3h. T1,2 Trunnion, Flat ditto. W1,2,3 Pulleys: 1/2",1", 1" Bossed. W4,6 1 3/4" Bush Wheel, 1 3/4" Wheel Disc. W5,5a,7,7a Road Wheels: 1 1/2",1"; Bossed 1 1/2",1". L1-3 Axles 1,2 1/2,4". L5,6 Crank Handles 3 1/2,6 1/2". L7 3" Crank Shaft. D Screwdriver. NB Nut & Bolt. SC Spring Clip. H1 Hook. N5 Spanner.

Those shown in red above were listed in the small format (early) manual but not in the later one; the blue ones were additions in the latter.

The actual parts – to supplement the earlier notes on the parts the No.2 box right gives some idea of many of them (the missing right end matches the left). The red colour though is too pallid & the green parts found are usually a lighter, fresher shade. Below,



parts from the large-format manual (no parts are illustrated in the earlier, small manual).

As explained in OSN 18 there were some changes to a few of the parts at some point, and the later ones can be seen in Fig.2. Earlier: • **Screwdriver** The shape of the wire handle was similar to Meccano's. • **Spanner** It was flat with an angled end. • **Pulleys** W2 & W3, nominally 1" Ø, were made of two 7/8" Ø formed aluminium discs held by a brass bush: short & 5/16" Ø on the Loose part; longer on the Fast & either 5/16" or 3/8" Ø, single- or double-tapped. (Later 1" Ø tinplate discs were used.) • **Road**

Wheel It was originally reported as being a fat rubber ring on a pulley, but was actually, as right, a dished, tinplate, 1 1/2" Ø balloon wheel painted black, with one of the Pulley discs on the



outer face held by a short 5/16" Ø boss, as on the Pulley W2. (The later Road Wheel, W7, was a 1 1/4" pulley made from 2 unpainted tinplate formed discs held by a brass boss and fitted with a rubber ring, 1 3/4" o.d. (but not the treaded tyre shown in Fig.3). It may have had a 3/8" Ø boss. As shown in Fig.2 there was also a Rubber Ring for the 1" Pulleys which when fitted to them presumably gave the W5 & W5a Road Wheels). • **Crank Handle** It had shallow bends of about 30°. • **Trunnions** Their base corners were square.

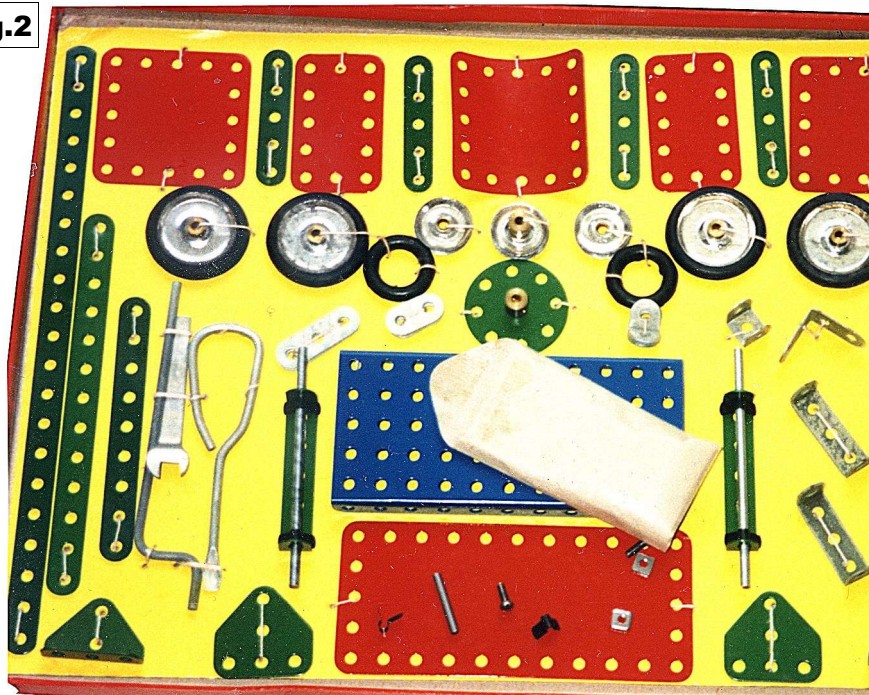
The Screwdrivers & Crank Handles were shown in OSN 18.

THE SETS Five, Nos.1-5, were produced and the boxes for Nos.2-4 were the same size in plan, 16*12", and had the same lid label (Fig.1), except for the round box size sticker. The No.1 was in a smaller box, about 10 1/2*9 1/2", and the label, again

Fig.1



Fig.2



nearly as large as the lid, was the centre of the Fig.1 design surrounded by the green Strips plus a narrow yellow outer border. The Every Boy's Dream Set slogan was along the top yellow border in black outlined letters.

As explained in OSN 18 more parts were added to the No.1 set at some stage and it is likely that the larger sets were improved too. These changes seem to have occurred at the same time as the changes in the parts, though some of the 'new' sets still have one or two of the old parts in them. Nearly all the 'new' sets have the large format manual; the 'old' ones the smaller version (see 18/505 & 1/6).

David's No.3 SET As already mentioned the box is as the No.2 except that it is 1 3/4" deep (against a bare 1") because it has 2 layers of parts. The backing boards are yellow as before and all the parts, apart from the N&B and other small items, are individually strung. The set has the early pattern parts and the small format manual. The N&B are untreated steel.

The contents are: 4,2,2,4,4 of 2,3,5,9,13,21h Strips; 2,2,2 of 3,5,9h long DAS; 4 A/B & 1x 2*2h A/B; 2 D/B; 2 each Trunnions & Flat ditto; 1x 5*11h Flanged Plate; 1x 11h long Flanged Sector Plate; (non) Flexible Plates: 2,2,2,2,1 of 3*5, 3*11, 5*5, 5*11, 5*5h Curved; 1 each Bush Wheel & Wheel Disc; 7/8" Ø Pulleys: 2 each Fast & Loose; 4 Road Wheels, 1 1/2" Ø; Axles: 2,4 of 1,4" (2 of the 4" are housed in the lugs of 9h DAS, held by Spring Clips); 1 Crank Handle, 6" long o/a; 1 Screwdriver; 1 Spanner; 33x 4BA square Nuts; 35 round-headed Bolts; 8 Spring Clips.

The Price? 24/6 is pencilled on the underside of the box and if that is the price it about the cost of a No.2 MECCANO in the late 1950s. So how do the sets compare? A No.3 for the

price of a No.2 and the PREMIER looks the more impressive with the parts in 2 layers in a larger box. In terms of content the PREMIER has a few more Strip parts (though a higher proportion of shorter ones would have been better), about the same number of Brackets & Plates, but fewer N&B (33 Nuts v. 46). Its parts also include the Sector Plate but the MECCANO has useful parts like a Hook, $\frac{3}{8}$ " Bolts, a #187 Road Wheel, & a Rod & Strip Connector. Another big plus for the MECCANO is the manual models, 33 against 4, better looking & more interesting.

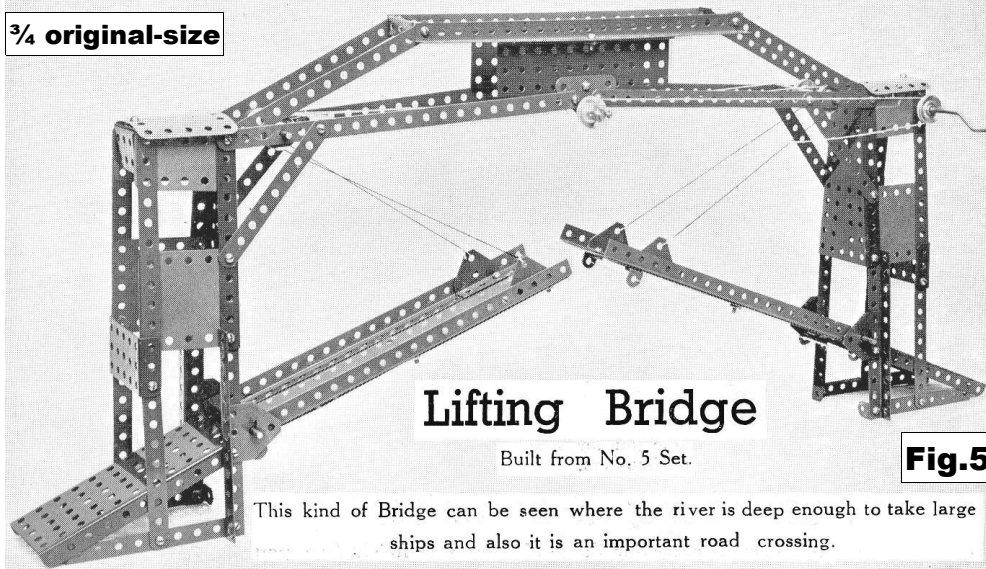
SETS 4 & 5 All the Ebay sets seen are simply the box with a few remaining parts. All that can be said is that the boxes are

deeper than the No.3, perhaps $2\frac{3}{4}$ " for the No.5 and somewhere between for the No.4. So possibly they had 3 or even 4 layers of parts.

The models for these sets, though few in number, are much larger & more interesting than those for the smaller sets. For the No.4 are a Tower Trailer with a Cord-operated rising platform, a good Mobile Railway Crane, a fair, 2ft span Transport 'Plane, & the Lorry below. The No.5's are another Mobile Railway Crane, the Lifting Bridge below, a 27" Sea-going Steamship, the Giant Wheel in OSN 18, & the Jib Crane below.

MYSTERY PARTS A Screwdriver and 2 Road Wheels have been found in each of 2 lots which contained mainly PREMIER parts. The Screwdriver is very similar in shape to the early pattern round-handled PREMIER part but is made from $\frac{1}{8}$ " Ø wire. The Road Wheel, below, is $2\frac{1}{8}$ " o.d., with an eyelet

$\frac{3}{4}$ original-size



Lifting Bridge

Built from No. 5 Set.

This kind of Bridge can be seen where the river is deep enough to take large ships and also it is an important road crossing.

Fig.5

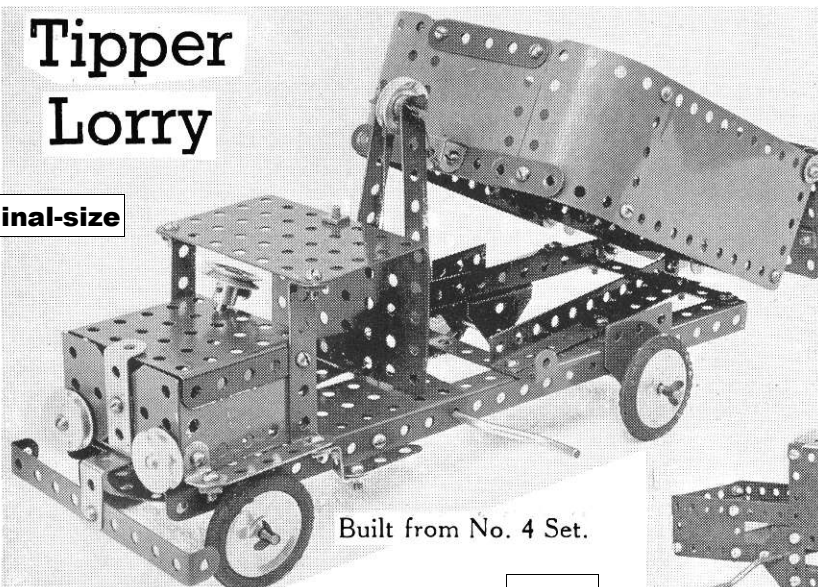


Fig.8

bush. Its tyre has 3 rows of tread. It reminded me of the illustration of W5 in Fig.3 but it is of course much bigger in diameter. Was there ever a PREMIER treaded tyre? Details of any other sightings of these parts would be very welcome.

Tipper Lorry

Original-size



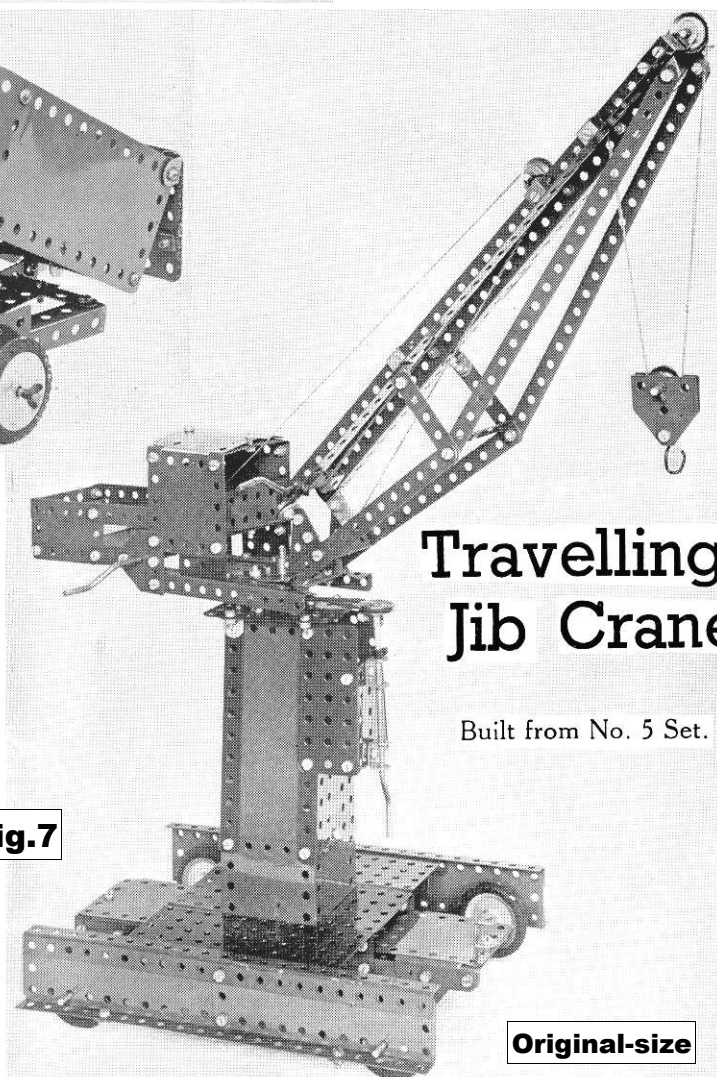
Built from No. 4 Set.

Fig.6

Builders and Road Repairers find this kind of Lorry very useful because it can carry loose materials, such as sand gravel and ballast, which can be tipped out just where needed, thus saving half the work.

These Cranes can move along the Dockside — unloading cargo from the ships. They are guided right over the hold and lift the cargo straight out into Railway Trucks and Motor Lorries.

Fig.7



Travelling Jib Crane

Built from No. 5 Set.

Original-size

MAKUMAL to MAK-EM-AL MAKUMAL, a set from Granite City, Ill., was described in 18/519. It was rather like a larger version of MOBILO with $\frac{5}{16}$ " Ø wooden Rods. Two sets have been seen since, one to hand, perhaps unused, and one on Ebay. Together they show some points of interest.

My Set. Its cannister is identical to the OSN 18 one and the contents too except that it has only 60 Rods, 6 of each length, and the Set contained a Model Leaflet & 3 Tacks (Fig.1a, $\frac{3}{8}$ " long with $\frac{31}{64}$ " Ø heads). Tacks are not mentioned in the parts listed on the outside of the cannister but could be used to create a pivot joint that was needed for some models instead of the wood screws envisaged in the Patent. Probably both the Leaflet & the Tacks were simply missing from the OSN 18 set. A wire Screwdriver and a small Hammer (as in Fig.1c, $4\frac{5}{8}$ " & $6\frac{3}{8}$ " long overall) were also in the Set but may not have been original.

Some of the parts differed a little too: the wooden parts are plain not dyed; 6 of the Pulleys run freely on the Rods & 2 needed their bores enlarging to make them a push fit (both types are needed for the models); and the Clamp is: nickelled; only $\frac{1}{2}$ " wide (though with the same size slots); and has some sharp edges. Also most of the Clamps are incorrectly bent (see Fig.1b) giving an offset tapped hole and making the 2 slots out-of-line by over $\frac{1}{16}$ " – this last making building models more difficult, perhaps impossible in some cases. And all the tapped holes needed clearing before the Bolt would pass right through. One can see why the parts look unused.

The Model Leaflet

is a sheet folded to make 4 sides 214*140mm. As can be seen the front, right, is headed MAK-EM-AL, & though the maker was still The Makumal Toy Company it had a new address: 4600 Cornelia Avenue, Chicago, Ill, & underneath it: 'Subsidiary RED WING MODEL AIRPLANE AND SUPPLY CO. | NOT INC. | CHICAGO, ILL.'

p2 has 'DIRECTIONS' with the a diagram showing the different joints headed by 'Use a Clamp for a screw driver'. Included are the two free pivots in Fig.3, obtained by the methods shown in the Patent, a Rod held to a Clamp by a Wood Screw (though the latter isn't actually mentioned in the Leaflet). Presumably the Tacks in the Set were to be used instead.

p3 shows 22 models, of which it is said 'several of the small ones can be made with one set'. There is one drawing of each with no instructions or list of parts. Some of the models are much more ambitious than those on the cannister, including 2 large fairground rides and a Loco. Of the rest some are the cannister models but the others, even though quite small, are, excepting 5 swings of various sorts, more 'with-it', with numerous (mostly somewhat strange looking) vehicles and



Fig.2

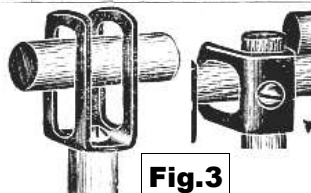


Fig.3

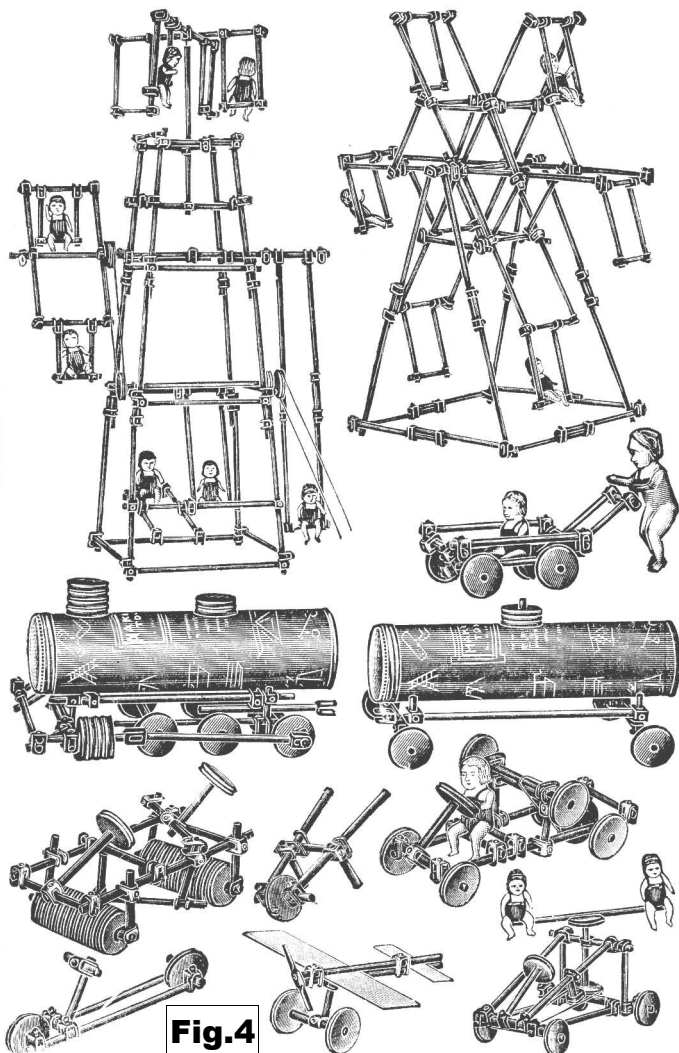


Fig.4

even a Monoplane, though nary a Crane or the like. The Monoplane was the only model to need non-system parts – apart that is from the cannister in the Loco & Tank Wagon, and the little figures (said to be jointed celluloid dolls which were to be pinned to the models). All the models mentioned by name are shown above plus a few others, all natural size.

p4 explains the virtues of the system length, leading to 'It is desirable to have several sets so that more elaborate pieces may be built.'

The Ebay set. It has the completely different cannister right and the set is now called MAK-EM-ALL, with the maker again The Makumal Toy Company, and at the new Chicago address. The cannister no longer has any details of the contents on it and the 8 models are a selection from the Leaflet including the large models & the Loco. The parts shown in the Ebay photos are plain wood Rods & Pulleys, plus Clips. For what it's worth 20 Clips can be seen & 8 Pulleys, but only 40 or so Rods. The Clips are the narrow type and look to be bent correctly. No sign of a Model Leaflet, or Tacks (or Tools), but all these of course are items prone to go missing over the years.

So it looks as if after the move from Granite City to Chicago, the new company hoped that a new name, a new cannister, a larger range of more interesting models, and perhaps some economies would boost sales. I wonder though – celluloid dolls, ugh!



Fig.5

Snippet. Another Bulgarian ELEKTROMEKHANICHEN KONSTRUKTOR Set

Three single-model sets in this series, all made by the Vasil Petleshkov firm in Bratsigovo, were noted in 36/1099, and one for a Helicopter was described. The present Robot set, from 1986, probably about the same year as the others, is shown right. Its box measures 11*9½" and it has 2 layers of parts, mostly housed in formed, clear plastic trays.

Except where noted later strip parts & Brackets are bright, probably nickelled, and Plates are light blue, the Flexible ones of translucent plastic. There follows a list of the parts in the Set taken from the Ebay photo of the Instructions: they are generally as in other Petleshkov sets with a hole pitch of 10mm. A '(?)' indicates that the Bulgarian has, or may have, defeated me.

- 2 **Fishplates**. • 2,15,4 **Strips**: 3,5, 10h. • 4 **Curved Strips**. • 4 **parts** which probably join the feet together, perhaps strips with upstood end lugs (?). • 8,8,4 **A/Gs**: 5,10,15h (bright with large holes, blue, black). • 4,4 **Trunnions** (7h with the 2nd row edge holes angled & slotted), **Flat** ditto. • 6,2,2 **Flexible Plates** (slotted end

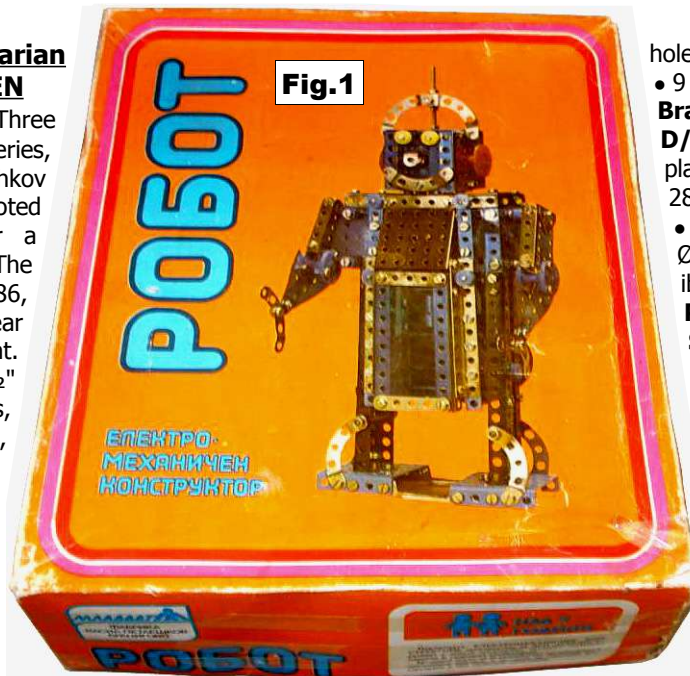


Fig.1

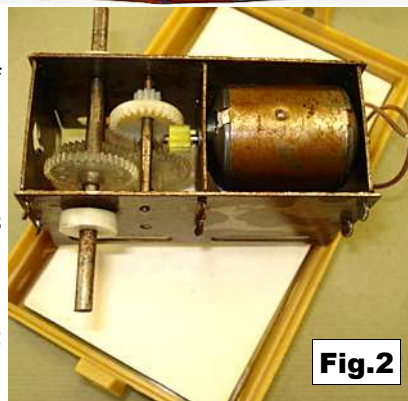


Fig.2

holes): 50*50,120mm, 30*150mm. • 9 **Flanged Plates** 5*5h. • 4 **Small Brackets** (?). • 2 **Brackets**, 3h. • 4 **D/B** 2h high. • 6 **DAS** 1*5*1h. • 10 plastic 8h **Wheel Discs** with boss, 28mm Ø (some blue, some white). • 2 bright 8h **Bush Wheels**, 28mm Ø. • 4,4 **Axes**: 15, 65mm (described as 'Ø36'). • 8 **Triangular Plates** 3h base, 5h high. • 2,3 M4 **Screwed Rods**: 50,65mm. • 16 white plastic **Axle Stops**. • 180 M4 hexagonal **Nuts**. • 150,10 M4 cheeseheaded **Bolts**: 6,8mm. • 2,1 M3 **Bolts**: 10, 15mm. • 1 M3 **Nut**. • 2 **Spanners**. • 1 **Electrical Block Connector**; • 1 **Nut Holder**; • 1 **Screw-driver**; • 1 **Battery Box** with switch; • 1 **Geared Motor Unit** (Fig.2, sitting on the inside face of the Battery Box's base). Unlike similar Units from this firm, the casing is metal. The pinion attached to the contrate meshes with the first of 4 reduction stages lower in the box). The Instructions, on numerous separate sheets, are step-by-step with a parts list and B&W photo for each step. The model's body is built from the A/Gs & Flanged Plates, infilled with the Flexible Plates. As far as can be seen the Motor Unit drives only the arms, through I suppose, some sort of crank mechanism. If so a rather disappointing Robot.

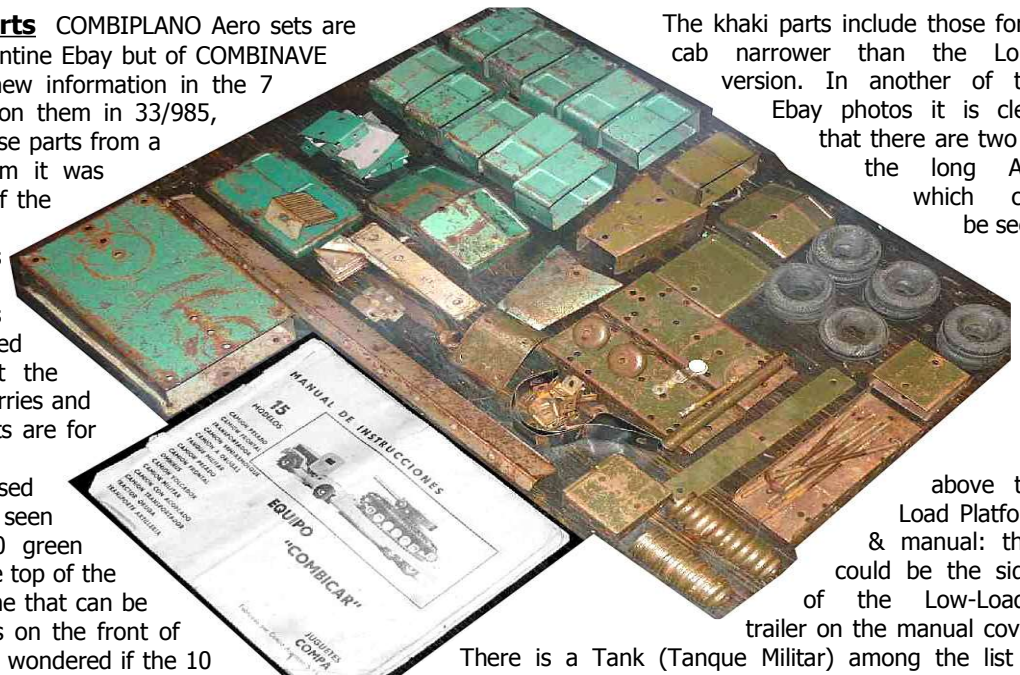
ELEKTROMEKHANICHEN KONSTRUKTOR: S2

OSN 48/1458

Snippet. COMBICAR Parts COMBIPLANO Aero sets are quite often seen on the Argentine Ebay but of COMBINAVE and COMBOCAR, the only new information in the 7 years since the brief notes on them in 33/985, has been 3 photos of the loose parts from a COMBICAR set, 160 of them it was said. The most informative of the photos is shown right.

The colours of the parts differ from those in the OSN 33 models with two shades of green and no contrasting red & yellow pieces. No doubt the lighter green parts are for Lorries and the like, while the khaki parts are for military vehicles.

Most of the larger parts used in the OSN 33 Lorry can be seen but the purpose of the 10 green parts grouped together at the top of the photo isn't obvious. One name that can be read in the list of 15 models on the front of the manual is Omnibus and I wondered if the 10 parts formed its body. But one would expect them to be nearer a square in section; also there seems to be an impressed window at one end of the top face and another at the other end of the bottom, and if so it's hard to see how the parts would be used. For the wheels, the hub for the Tyres may be a pair of the Formed Discs, a row of which are shown in the bottom right corner.



The khaki parts include those for a cab narrower than the Lorry version. In another of the Ebay photos it is clear that there are two of the long A/G which can be seen

above the Load Platform & manual: they could be the sides of the Low-Loader trailer on the manual cover.

There is a Tank (Tanque Militar) among the list of manual models but apart from the Gun Barrel I can't identify which parts would be used for its body & turret. But perhaps the Curved Plate to the left of the black Mudguards would be the front of one or the other. There is no sign of the Track but the Track Wheels are probably the parts in the other row of small circular parts (both types can be seen in the Illustrated Parts shown in OSN 36).

COMBICAR: S2

OSN 48/1458

TECNICO This Swiss system, which ran from 1933 to the 1950s, has unusual parts, and its extending 'strips' made from one 'U' section part sliding in another have, as far as I know, never been copied. This account is based on 2 early complete sets to hand, plus recent information from Urs Flammer, & earlier from Thomas Keel & Richard Symonds. Thank you to all.

HISTORY A leaflet in German with the Sets was from Joutec A. C., 30 Rue du Stand, Genf (Geneva). It shows Sets 1, 1A, & 2, and speaks of larger sets that will be on sale in 1935. It also advertises a model competition to end in Dec. 1935. So, given a manual 2-34 (manuals have a set number followed by a number which is thought to indicate a year), and the dates of the patents described later, it is likely that TECNICO was introduced in 1934 or possibly 1933. The larger sets mentioned in the Leaflet were the Nr.3, the largest in the range, and the linking set 2A.

All later literature is in French & German. A 1943 price list has a starter Set A with 5 add-on sets B-F in addition to the basic outfits. Sets A-F together were equivalent to Set 2. The A-F sets were probably introduced in 1936: a French brochure (from Tecnico, 65 rue de Courcelles, Paris 8^e) lists the contents of Sets A-F and the A includes a manual 0-36. (Why '0' rather than 'A'? Was a Set 0 ever contemplated?) No manual is shown for the other sets but Set A was said to contain a slip which a dealer would exchange for a 2-36 manual.

Another 1943 price list also includes combined Sets A-B, C-D, & E-F, and one headed 1943-44 has in addition Set 21 with 3 add-on Sets 22-24. A 1946 price list has all the above outfits.

None of the literature after the Leaflet shows a maker until the 1946 price list in which it is Tecnico, Emile Beiner, La Neuveville (a town on Lake Biel). The maker would have been on the missing back cover of the 3-41 manual described later.

No end date is known for TECNICO but it is said that it continued until at least 1950 and perhaps until around 1955. A patent from 1952 could indicate that new parts were being considered.

PARTS Exceptions to what is said in this paragraph will be noted in the list of parts that follows it. **Parts** are chemically blackened steel, about .5mm thick; they are well made &

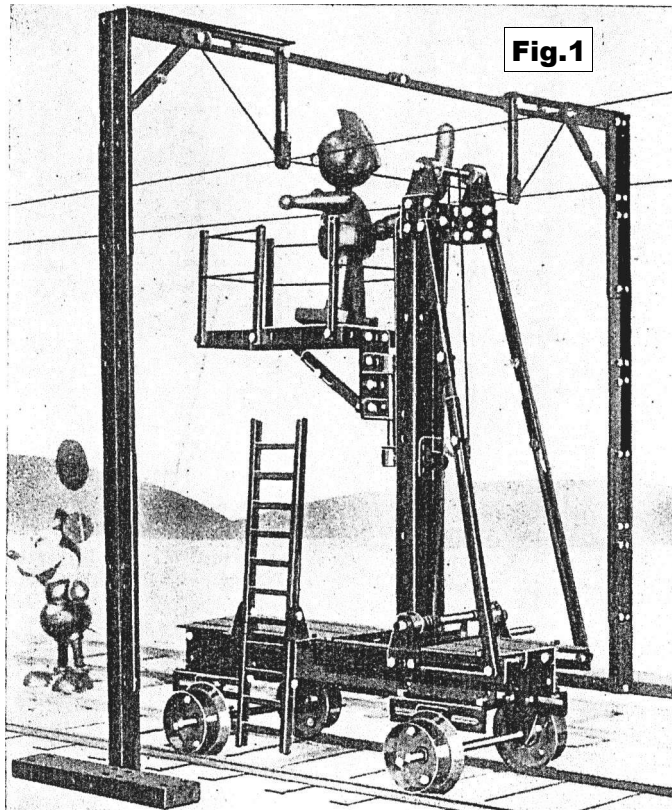


Fig. 1

3.6 Gerüstwagen mit aufziehbarer und drehbarer Plattform
Plate-forme élévatrice et pivotante sur truck

2-1	2-3	2-4	2-9	2-11	3-13	1-17	1-18	5-19	6-24	8-25	3-31
2-33	4-34	8-16	2-47	1-48	2-70	2-51	5-66	4-96	4-97	4-98	6-103
415-113	2-120	2-121	1-133								

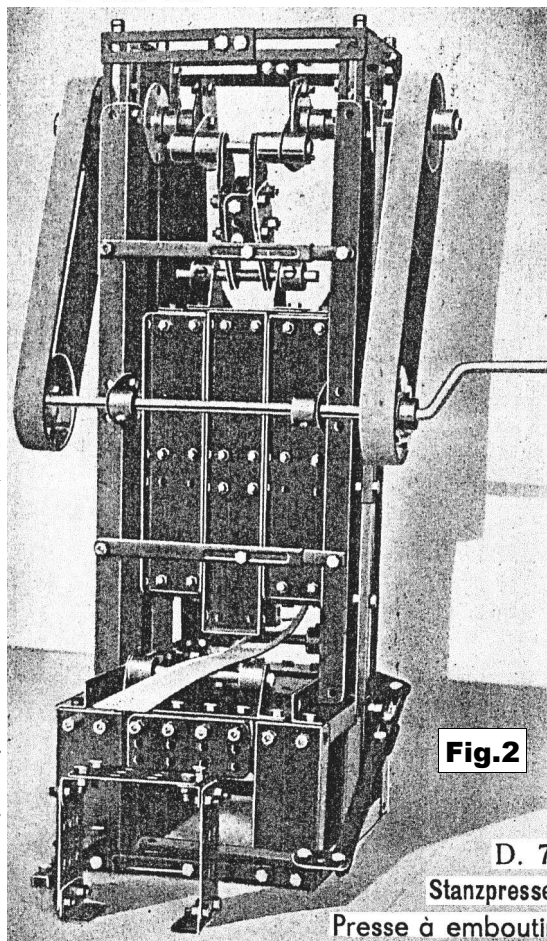


Fig. 2

D. 7

Stanzpresse

Presse à emboutir

nicely finished. **Holes** are 2.8mm at multiples of 11mm pitch, viz 5.5, 11.0, & 44.0mm. **Slots** are 2.9mm wide. The **N&B** are possibly $\frac{3}{32}$ " BSW but the fit with the TECNICO parts is rather snug, and if it seems an unlikely thread for a 1930s Swiss system then the only possibility I could find is the No.7 Swiss Thury. I don't have examples of it but its dimensions are very similar to 7 BA and that doesn't fit the TECNICO N&B at all. The **Collar &** (only) **boss** are 4.0mm bore, 10.0mm o.d., & are single-tapped M4.

The parts are shown in Fig.3 (most roughly to scale but parts #96-98 in particular are much too small – #98 is actually half the diameter of #108): those above the red line are in Sets 1 & 2; those below only in Set 3. The second column in Fig.4 has the parts' main dimension, the length o/a or the diameter (but the '4' for #96,103-4 is the bore, or for #105 the jaw opening). The

parts are listed below with my names and comments as necessary. Details have been taken from my early Sets 1 & 2. None of the No.3 parts, shown in red, have been seen, but Urs has provided some key dimensions.

- **#1,3,4 U-Channel.** 22¼mm wide & 8¾ deep, 9¼ for #1.

- **#9,70, Flanged Plates.** #9 is 19½*110mm, 8¾mm deep. It slides inside the U-Channels.

- **#11,13,14,66 A/Gs.** #11-14 are 9¼*11¼mm; #66 9¼*10. All corners are near fully radiused. Earlier #66 was sometimes listed as #55.

- **#17,18,19 Slotted A/G,** 8¾*10½mm but #19 is 9¾*9¾. Slots are 46½mm long. Corners are almost square.

- **#24,25 Trunnion & Flat ditto,** the apex hole is 4.0mm Ø for the Axles, at 16½mm pitch from the centre base hole in #25. The Patent explains the use of the joggle in #25.

- **#30,31,33-35,36 U-Girders,** 5¾*3½mm deep. Slots are 29½mm long but 22½ in #31.

- **#45,46,47 Inner U-Girders,** 4½*3mm. They are a snug sliding fit in the U-Girders with virtually no side play, and the tops of the 2 parts are level. The holes in #46,47 are at about 31½, 38½mm pitch.

- **#48-50,51 Plates, Strip.**

- **#96 Bush Wheel,** brass plated. Its disc is 27mm Ø, .8mm thick, with face holes at 11.0mm radius. The base of the boss is enlarged to 12.0mm Ø over a depth of 2mm to enter

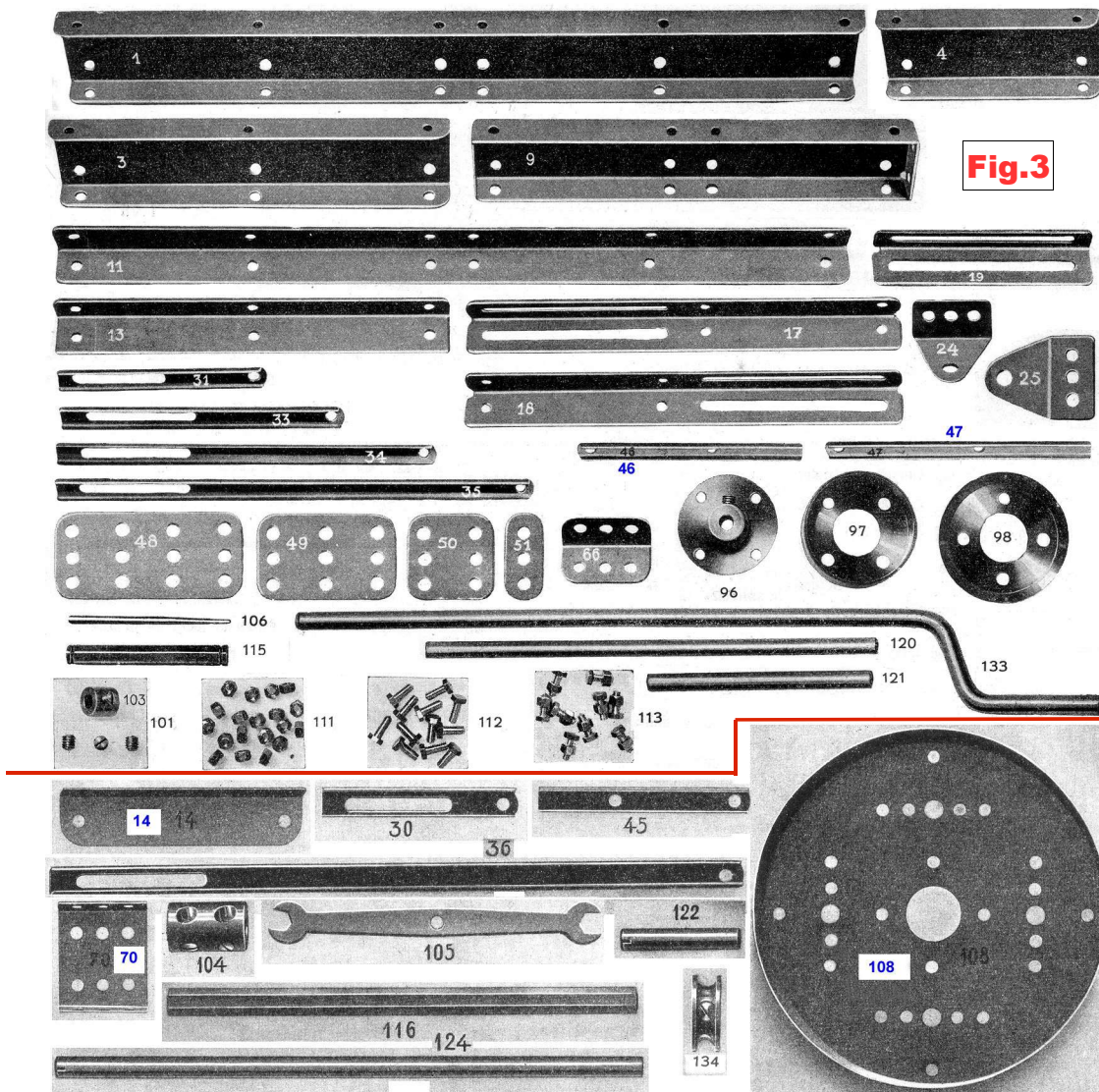


Fig.3

#97,98. Later the single peripheral holes were replaced by pairs which scale at 5.5mm pitch, see Fig.9.

- **#97 Drum**, brass plated, 30.4mm Ø with a very, very slight taper over its 9½mm depth.
- **#98 Pulley Disc**, brass plated.
- **#101 Grub Screw**, steel, M4, 4½mm long with flat end.
- **#103 Collar**, brass, 8mm wide.
- **#104 Coupling**, 16mm long, 10.0mm Ø.
- **#105 Spanner**. In an Ebay set it scales at 72mm long.
- **#106 Drift**, plain steel, tapers from 2.8 to 1.5mm Ø.
- **#108 Flanged Circular Plate**, red. Note the 4 enlarged holes. Some models show fewer face holes, as in Fig.15.
- **#111 Nut**, brass, hexagonal, 4.0mm A/F, 2.6mm deep.
- **#112 Bolt**, brass, hexagonal head, 4.0mm A/F. 1.6-1.8mm deep, 6¼mm u/h.
- **#113 Nut & Bolt**.
- **#115,116 Box Spanners**, brass, hexagonal tube 4.8mm A/F, with the ends belled a little to accept the Nut, but not 'notched' as shown in Fig.3
- **#120,121,122,124 Axles**, nickelled steel, 3.96-4.00mm Ø with deburred square ends.
- **#132,133 Crank Handles**, as Axles. #132 has a 14cm shaft; #133 is not illustrated.
- **#134 Loose Pulley**, 16mm o.d., 6mm wide. The 11mm would be the throat diameter.
- **#341, 036 Manuals**. The 036 not been seen.
- **Screwdriver**. There was a small Screwdriver in the No.2, useful for the Grub Screws, but probably not original. It is 78mm long with a 19mm, 2mm Ø blade, & wooden handle tapering up to 11mm Ø.

PATENTS The known patents are listed below in chronol-

ogical order. The patentee was Jules Louis Badel of Geneva, together with Adolphe Fernand Wachsmuth for the first Swiss patent. The Leaflet says that TECNICO is patented at home & abroad but the earliest patent may be French because the convention date, for France, is 11/8/33 in the UK patent. No details of the French version are to hand. The UK patent says that Badel was Swiss & his address was 78 Rue de Lausanne, Geneva.

The U.S. patent 2082138 has application/accepted dates of 21/7/34 & 1/6/37. It shows examples of most of the various parts including the inner & outer U-girders, A/Gs, and brackets, but not the circular parts #96-98, and nor are they mentioned. Also shown are some structures including a girder bridge. One illustration, left, explains the joggle in the Flat Trunnion. Another, the arch below, but it isn't clear which parts are

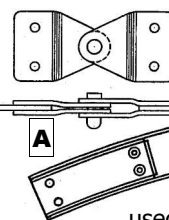
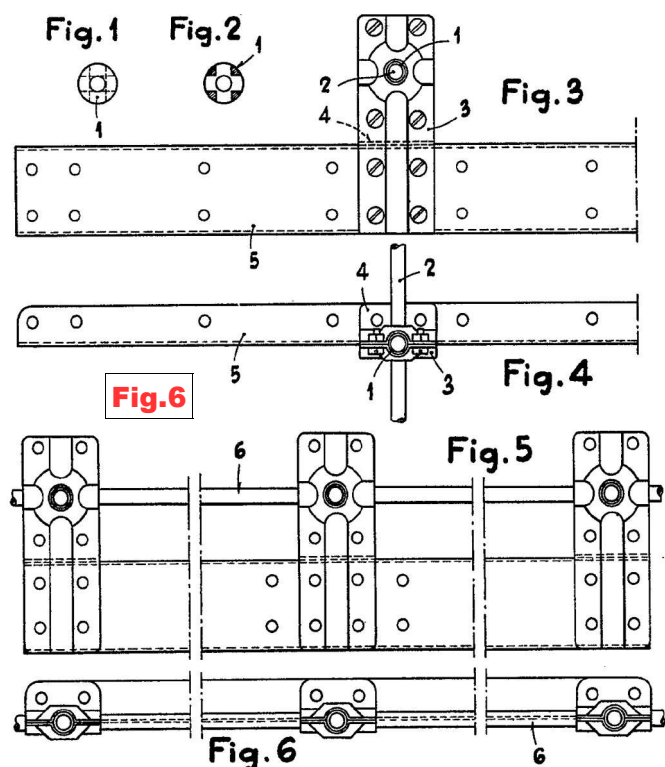


Fig.5

used in it. All my attempts to make something similar ended with a jagged top or bottom curve but the outlines in Figs.11 & 12 look smooth enough. **The Danish patent** 52153 has application/accepted dates of 7/8/34 & 4/9/36. It covers only the U-girders. **The UK patent** 441564 has dates of 9/8/34 & 22/1/36. It covers the same ground as

Nr	Abmes- sung mm.	A	B	C	D	E	F	I	2	3
1	195	—	—	—	—	1	1	—	2	2
3	96	—	—	—	—	1	1	—	2	4
4	52	1	—	—	—	—	—	1	1	2
9	110	—	—	—	—	1	1	—	2	4
11	195	—	2	—	—	—	—	2	2	4
13	96	2	—	2	—	—	—	4	4	6
14	52	—	—	—	—	—	—	—	—	4
17	110	—	—	1	—	—	—	1	1	2
18	110	—	—	1	—	—	—	1	1	2
19	53	4	—	—	—	—	—	4	4	8
24	4	4	—	—	2	—	—	2	6	8
25	4	—	2	2	—	—	2	2	6	10
30	42	—	—	—	—	—	—	—	—	2
31	54	1	1	—	2	—	—	4	4	6
33	72	—	—	2	—	—	—	2	2	4
34	97	—	—	2	2	—	—	4	4	4
35	122	—	—	—	2	—	—	2	2	2
36	147	—	—	—	—	—	—	—	—	2
45	46	—	—	—	—	—	—	—	—	2
46	57	1	1	2	—	2	—	6	6	10
47	71	—	—	2	2	2	—	6	6	8
48	—	—	—	—	2	—	—	2	2	4
49	—	—	2	—	—	—	—	2	2	4
50	—	2	—	—	—	—	—	2	2	6
51	—	—	2	—	—	1	1	2	2	6
66	—	—	2	—	2	—	—	2	2	6
70	—	—	—	—	—	—	—	—	—	2
96	4	2	2	—	—	—	—	—	4	8
97	30	—	—	—	2	2	—	—	4	8
98	37	—	—	—	—	4	—	—	4	4
103	4	—	2	2	—	—	—	—	4	8
104	4	—	—	—	—	—	—	—	—	2
105	4	—	—	—	—	—	—	—	—	1
106	45	—	—	1	—	—	1	1	2	2
108	75	—	—	—	—	—	—	—	—	4
111	—	22	16	16	16	15	17	60	101	200
112	—	22	16	16	16	15	17	60	101	200
113	—	—	—	—	—	—	—	—	—	—
115	44	1	1	—	1	—	—	2	3	3
116	100	—	—	—	—	—	—	—	—	1
120	100	1	1	—	—	—	—	—	2	2
121	50	—	—	—	1	1	—	—	2	3
122	25	—	—	—	—	—	—	—	—	2
124	125	—	—	—	—	—	—	—	—	2
132	152	—	1	—	—	—	—	—	—	—
133	177	—	—	—	—	—	—	—	1	1
134	11	—	—	—	—	—	—	—	—	2
341	—	—	—	—	—	—	—	—	1	1
036	1	—	—	—	—	—	—	—	—	—
		64	49	49	49	43	45	175	294	578

Fig.4



the U.S. version. **The first Swiss patent** 181566, has dates 31/1/35 & 16/3/36. It shows only the use of the 3 circular parts #96-98 to make a wheel, a pulley or a drum, and mentions the possibility of using a toothed disc. None of these parts are mentioned in any of the other patents. **The Austrian patent** 145216 has dates 15/11/35 & 10/4/36, and shows the U-girders and the girder bridge. **The second Swiss patent** 300054 has dates 9/6/52 & 16/9/54, and is solely about providing self-aligning shaft bearings. Some of the illustrations are shown above: an elevation & cross-section of the spherical bearing itself in Figs.1 & 2, while the other drawings show supporting brackets which are formed with recesses to hold the bearing for a shaft running in either of the 3 main planes. Other figures show brackets for shafts carrying meshing bevels. A final paragraph says that the method is intended for toys and could not be used in industrial applications because it would present 'certains inconvénients'.

SETS Fig.4 shows the Set Contents, excluding Sets 1A & 2A. As far as I can tell from the very limited number of examples seen, there were no changes to the composition of the Sets over the years, nor to the packaging, beyond the position of the label on some lids. The parts are attached individually to backing boards, a few by clips or cord, but mainly by the N&B from the Sets.

Sets 1-3. Backing boards are yellow, printed in red with the shape of each part and its Set No. Also with TECNICO in large letters across an unused space at one end, as below. **The Set 1** box is yellow, 30¾*22* 1¾cm, **Fig.7**



just big enough to take the manual unfolded. The label covers the lid, as right, and the green round sticker gives the set size.

The Set 2 box is silver, 30¾*44*1¾cm, & the Set 1 label is either central on the lid or in its bottom left corner. **The Set 3** box is also silver, about 62*43cm & with the same label. It has 2 trays side by side & the TECNICO name is split between the boards with TECN on one and ICO 3 on the other.

The Linking 'A' Sets. No examples of these have been seen but from a brochure the 1A box is the same size as the Nr.1, and the 2A as the Nr.2. The labels too are the same size and the backing boards are in the same style.

Sets A-F. Boxes are yellow, about 15*21cm, with similar labels to Sets 1-3, and similar backing boards, but in different colours: yellow printed in red for Sets A & D, blue printed in gold for B & E, as right (but white printing has also been seen on Ebay), and red printed in gold for C & F. An A-B set has the same yellow box but deeper to take the separate A & B cards.

Sets 21-24. No actual set has been seen but a B&W photocopy of a Nr.24 lid label is the usual type, as in Fig.8. Another B&W photocopy is of a Nr.24 backing card with the parts attached to it. It is in the style of the A-F sets and the parts on it are 2x#3; 1x#4; 2x#11; 1x#17; 1x#18; 4x#19; 4x#25; 2x#30; 2x#31; 2x#45; 2x#46; 4x#50; 2x#51; 2x#66; 2x#96; 2x#97; 2x #104; 2x#108; 51x#111; 51x#112; 2x#124. Finally a leaflet for the Nr.24 which says it contains 51 parts plus 48 N&B – 3 fewer N&B than on the card (in both my sets there were 1 or 2 extra N&B). Also that over 250 models can be made from Sets 21-24 together (against over 289 claimed for Set 3), and that a 3.41 manual is included in Set 21. Said manual, which would also have been in the Set 1-3 sets, is described later and contains 148 models from Sets 1-3 plus 3 larger 'mystery' 'D' models.

MANUALS Details are to hand of two manuals, one from 1934, all in German, for Set 1 & 2; the other from

1941 in French & German, for Sets 1-3. They are in portrait format and their front cover design, in common with all the manuals seen on Ebay, is shown right, identical to the lid label in Fig.7. However although most have a yellow background colour, it is fawn in a few cases, and the red colour right is even rarer. Usually there is no way of knowing the age and content of Ebay manuals because the ref-

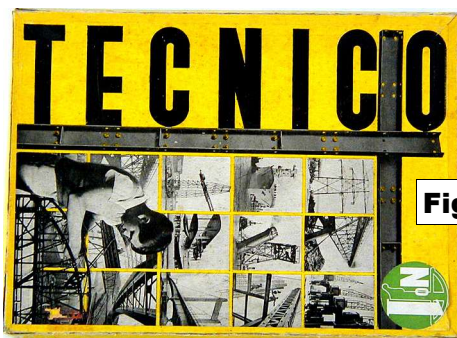


Fig.8



Fig.9

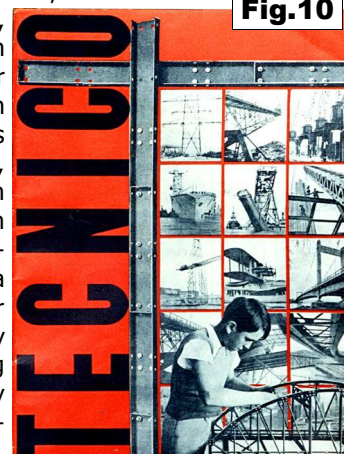


Fig.10

erence number is on the title page, with no indication on the cover.

Manual 2-34. 16 A4 pages plus covers, with a fawn front. C2 extols the system & the title page 1 has an Intro under the manual number atop the page. p2 has the Illustrated Parts & p3 the Set Contents. pp4-5 show numerous different sections that can be made with A/Gs, followed by the use of the circular parts #96-98 to make wheels, pulleys, drums, etc. p6 shows braced frames & trusses.

Nr.1 models. 25 on pp7-12 from 1-1 Bleistiftzirkel (Pencil Compass) to 1-25 Schneepflug (Snowplough). Models 1-11 are not all in order.

Nr.2 models. 7 on pp13-15 from 2-1 Stosspuffer für Eisenbahnen (Railway Buffers) to 2-7 Flug Karussell (Flyboats), which needs 3 additional parts (see Fig.13).

p14 has an offer of free advice on queries about manual & original models. pp16-C3 have photos of 8 much larger models, mostly Bridges but including the Crane below (Figs.11). Also below, Fig.12, one span from one of the Bridges, with the arch presumably made as in the Patent. C4 has the company's name & address.

There is a B&W photo & parts list for each model plus extra views in some cases. The photos are often too dark and it is hard to see the details of some of the more complicated models. The Nr.1 models are mostly simple with drawing instruments, frameworks, railway items, and among the better models, a 2-Pan Scales & a Drop Hammer. The Nr.2 models are quite small but much more interesting with 2 Railway Wagons (which need card infill), a Railway Handcar, a Fan that could be a Windmill, & the Fig.13 Roundabout, both the latter

belt driven. The Roundabout needs 3 parts not in the Set.

Manual 3-41. This description is taken from two manuals, both B&W photocopies. One lacks the title page, the other a model page, and both lack the back cover, but they are very probably the same edition. There are 36 pages plus covers, and C1-p1 are as 2-34, apart from different layouts to accommodate the two languages. p2 has the Set Contents, and the Illustrated Parts are on pp3-4. The use of parts 96-98 is also on p4, and p5 has braced frames, both as 2-34.

Nr.1 models. 44 on pp6-11 from 1.50 Schneesflug/Chasse-neige (Snowplough) to 1.5 Staffelei/Chevalet (Easel). Another model, 1.66 Aufnahmegerät für Schlagbaum/Guide de barrière mobile (?Moveable Road Sign) is on p29.

Nr.2 models. 85 on pp12-29 from 2.54 Anhänger/Remorques (Trailer) to 2.6 Handkurbel-Ventilator/Ventilateur à manivelle (Crank Handle driven Fan). Two other models are on p35: 2.98 Drehbare Wagenleiter/Echelle roulante et pivotante (Slewing Ladder on Wheels) & 2.90 Vorrichtung zum Aufwickeln von Kabeln/Machine à enrouler les câbles (Cable Winder).

Nr.3 models. 16 on pp29-36 from 3.1 Drehbank/Tour de mécanicien (Lathe) to 3.22 Maschine zum Gewinnen und Aufbereiten von Kies/Machine à extraire et trier le Gravier (Gravel Extraction & Sorting Machine) see Fig.17.



Fig.11

The models here, and all the others in this article, are shown at their original size.

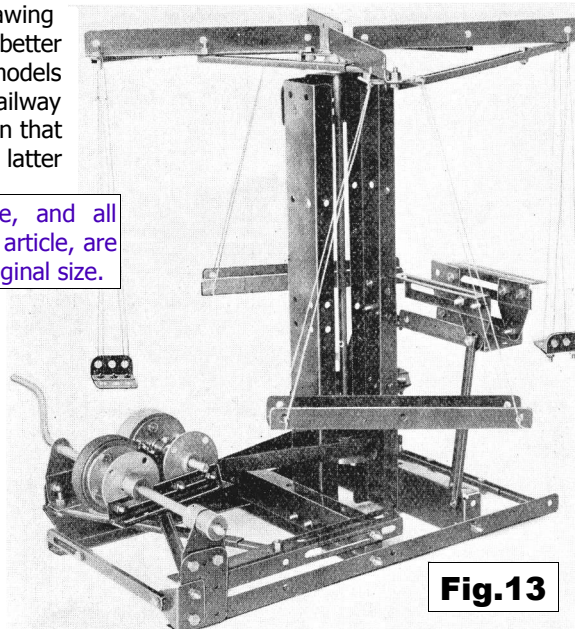


Fig.13

Flug Karussell mit Handkurbel und Riemenantrieb.
Spannung des Riemens durch Lœnix (Riemenspanner)

Modell Nr. 2-7



Fig.12

Bestandteile :

2	St.	Nr.	1
2	»	»	3
1	»	»	4
2	»	»	9
2	»	»	11
4	St.	Nr.	13
1	»	»	17
1	»	»	18
3	»	»	19
6	»	»	24
6	St.	Nr.	25
3	»	»	31
2	»	»	33
4	»	»	34
2	»	»	35
6	St.	Nr.	46
4	»	»	47
2	»	»	48
2	»	»	49
2	»	»	50
2	St.	Nr.	51
2	»	»	66
4	»	»	96
3	»	»	97
4	»	»	103
77	St.	Nr.	113
1	»	»	121
1	»	»	133
Ergänzungsteile			
2	St.	Nr.	96
1	»	»	103

'D' models. Finally on (probably) C3, 3 models: D.7 Stanz-+ presse/Presse à emboutir (Stamping Press); D.11 Vertikal-Bohrmaschine/Perceuse (Drilling Machine); & D.3 Funkmast/ Pylône de T.S.F. (Radio Mast). Fig.2 is one of the 2 views provided of the Press. All the models are impressive but they are a puzzle because although no parts list is shown, they certainly couldn't be made with the parts in the A-D sets – the Mast for example is 16 bays tall, each braced on all 4 sides.

The presentation of the models is as in the 2-34 edition and the free advice for model builders is again offered, also yearly & 3-monthly model building competitions, as on the original Leaflet.

The models offer a much greater variety than before. The Nr.1's now include more domestic items as well as a Footbridge, a Roman Balance, & a Telegraph Pole. Many of the new Nr.2 models are machine tools, or other machinery including a number of Cranes & Weighing Machines, and the Pump right. Mechanical features are belt drives, and a band brake on some of the Cranes, as in Fig.16. A Ship's Steering Mechanism, & Level Crossing Barriers caught my eye, also various vehicles, a Tramcar, a Racing Car, a Monoplane, & a Delivery Van, though these are all rather skeletal. A ?cat called Felix, as in Fig.1, is shown operating some of the models. The Nr.3 models are mostly more and better machinery, though they disappoint a little because none feature structures with extensive bracing. The most impressive looking is the Gravel Extraction Plant in Fig.17 but its finer points can't be seen in the poor copy to hand (and the quantities in the first column of the parts list are missing). Other good models are a small Railway Breakdown Crane & a Cable Twisting Machine. The 3" Flanged Disc allows the more realistic Lorry right but a slightly larger version of the Racing Car still runs on the Drum wheels.

USING THE PARTS To start with I made the Fig.13 Roundabout. The PL (parts list) was almost accurate and the model was quite straightforward to make. It worked well, including, to my slight surprise, the drive, using a wide, flat rubber band as a belt. In appearance I thought it looked not unattractive though it must be said that I may have been swayed by my liking for black parts. The tiny N&B were of course tiresome to use and would I think have been just as difficult for youngsters (remembering the extra difficulty I had as a boy with the 6BA N&B in the small MECCANO Aero sets). The problem was eased a little by the opening on one side of the Nut being deeply chamfered which made it easier to engage the Bolt. And the Box

Spanner allowed a Nut to be carried to the model in its end. But when all else failed a pair of locking forceps came to the rescue.

The hex Bolt heads looked attractive on the outside of the model but in tight corners the Nut had to be on the outside

2.21			
2-1	2-8	1-4	2-9
4-13	1-17	1-18	4-19
4-24	5-25	2-31	1-33
1-34	1-46	2-48	1-49
2-51	2-66	4-96	1-97
4-103	62-113	2-120	1-121
1-133			

Fig.14

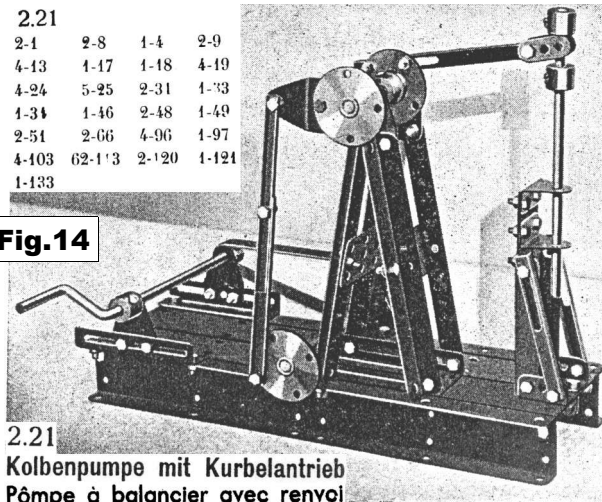
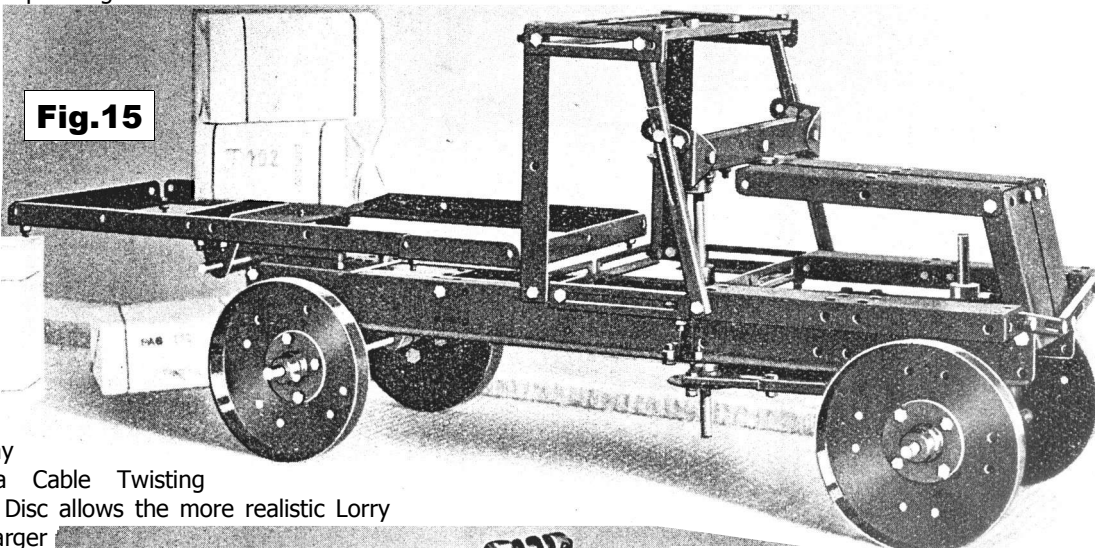


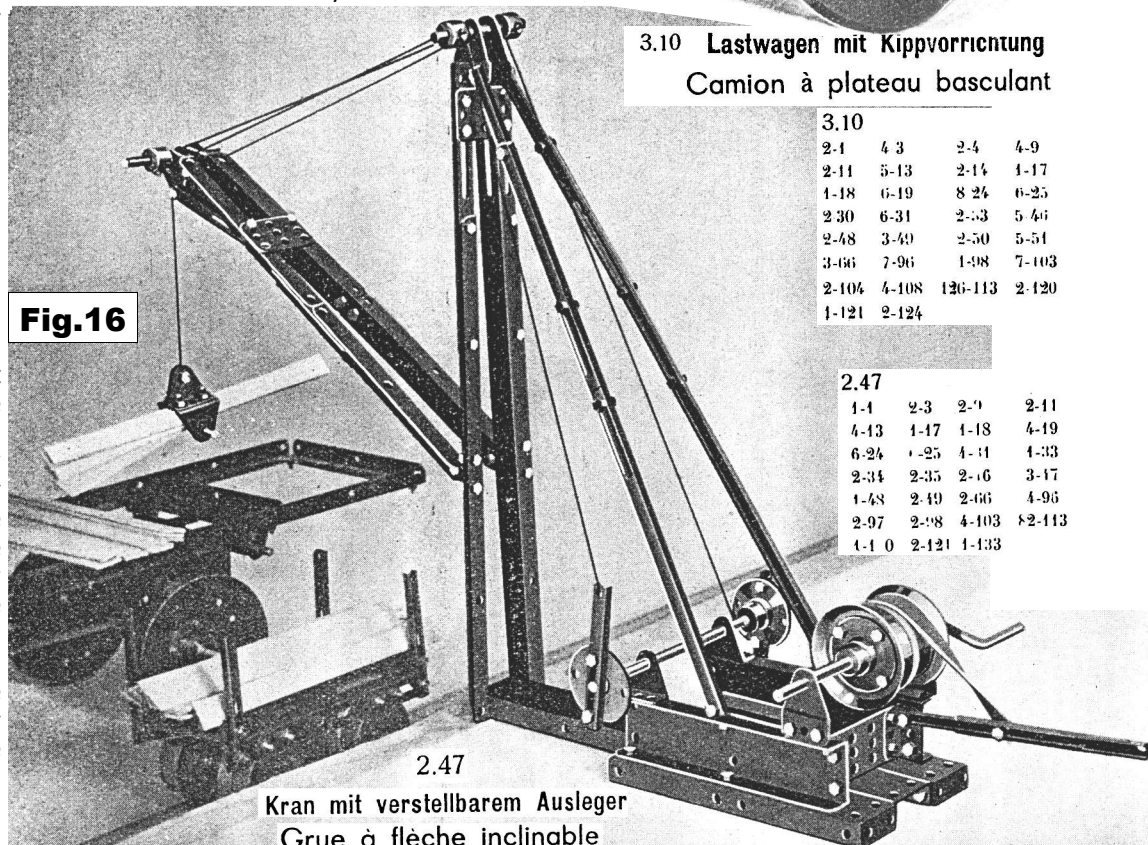
Fig.15



3.10 Lastwagen mit Kippvorrichtung Camion à plateau basculant

3.10			
2-1	4-3	2-4	4-9
2-11	5-13	2-14	1-17
1-18	6-19	8-24	6-25
2-30	6-31	2-33	5-46
2-48	3-49	2-50	5-51
3-66	7-96	1-98	7-103
2-104	4-108	136-113	2-120
1-121	2-124		

Fig.16



2.47			
1-1	2-3	2-9	2-11
4-13	1-17	1-18	4-19
6-24	1-25	4-11	1-33
2-34	2-35	2-16	3-17
1-48	2-49	2-66	4-96
2-97	2-98	4-103	1-113
1-110	2-121	1-133	

and often then the Bolt shank looked over long. Two lengths of Bolt would have been a nice refinement.

The Box Spanner allowed the Nuts to be tightened sufficiently in most cases, but when there was insufficient room for it to be used, or a Nut had to be really tight, an open-ended spanner was needed.

Next, I combined both sets to make a Beam Pumping Engine of my own design. The result is shown in Fig.18. One aim in deciding on the subject was to be able to use some cross-bracing. The main 'foreign' parts used were plastic sheet for the cylinder casing, extra Collars, longer Bolts, & Bolts with slotted heads.

The mechanism is a horizontal arm in the base which as it rotates causes a cord from its end to draw down the piston rod, which then rises under the weight of the pump rod as the arm moves through the second half of its rotation. The arm is a Strip bolted to a built-up pulley & the latter is normally driven by a band riding on a (substitute) Coupling (2 Collars could have been used) on the Crank Handle at the model's lefthand end. For display purposes the drive is from the small commercial geared motor which can be seen poking through the top of the base to the right of the pump rod.

The notional valve gear is 'operated' by a spring-loaded lever (a Strip & a rubber band) on the valve chest. This was to have been controlled by a rod from the beam but lack of parts prevented this & even if the parts had been available it would have been difficult to find a way of attaching the rod to the beam (so an 'engine-boy' would have to operate the lever!).

Compared with normally perforated parts it was, as might be expected, generally more difficult to use the TECNICO pieces effectively in designing the model, and some compromises were needed. In many cases a few extra holes would have a great help without I think significantly negating the designer's presumed aim of making models look as realistic as possible. For instance, replacing the single holes in the A/Gs by pairs, as in the centre of the longest #11, would have made cross-bracing much easier, and a hole, or better still a short slot, at the plain end of the Inner U-Girders would have allowed their use generally instead of simply extending the length of the U-Girders. I could go on. The lack of holes led in several cases to parts being clamped rather than bolted in place, the Bush Wheel for the pump rod for example, and this led to the need for longer Bolts.

The cross-bracing was tricky to fit and I think that with cross members only single-bracing would be possible. Two difficulties are worth a mention. First, when two U-Girders are bolted back to back both the Nut & the Bolt head disappear inside the U-section. They are small enough to rotate but the clearance isn't sufficient to allow the Box Spanner to fit over them. An open-ended spanner can't turn them either but held downwards over the Nut can stop it turning, and then a substitute slotted bolt can be tightened in the usual way. Secondly, how, as in the pump rod, can a Rod be connected to a Strip? The only way found was to bolt a pair of U-Girders back to back and clamp the Rod between a pair of Inner U-

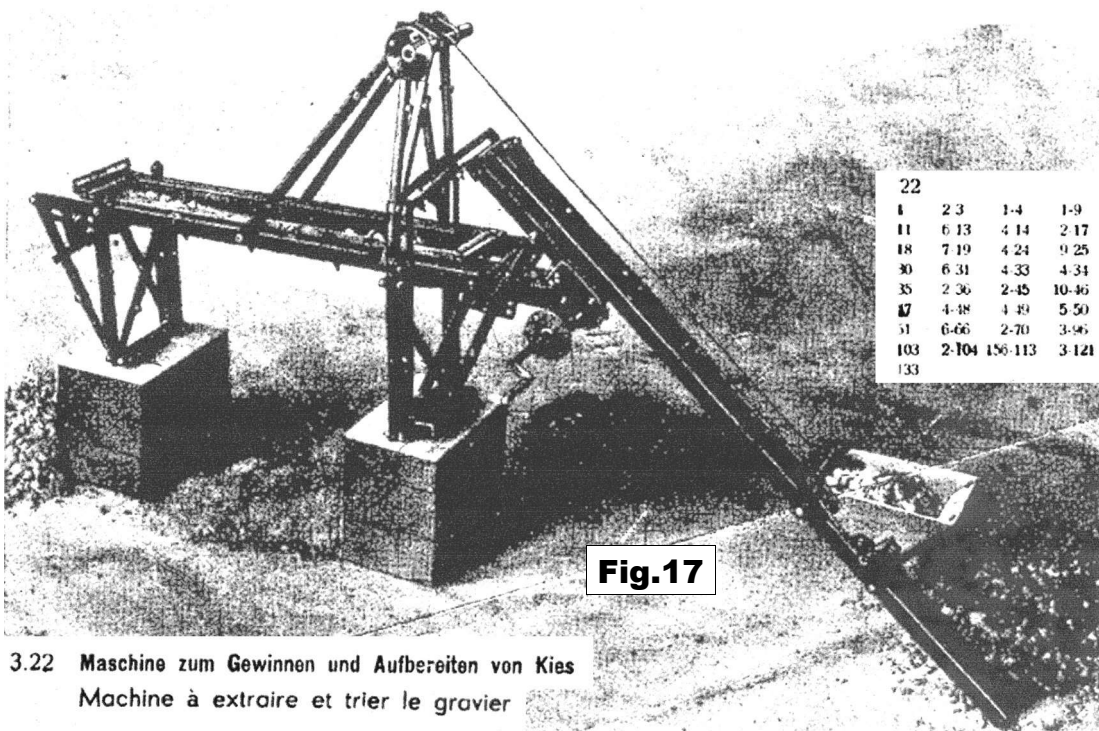


Fig.17

3.22 Maschine zum Gewinnen und Aufbereiten von Kies
Machine à extraire et trier le gravier

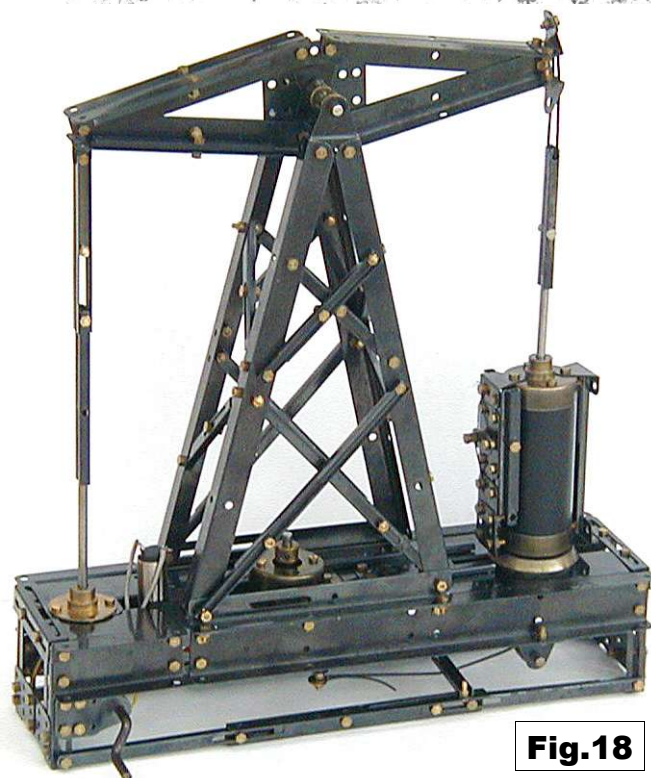


Fig.18

Girders with their tops bolted to the U-Girders.

REMARKS I wondered how TECNICO compared with, say, MECCANO in price, in Switzerland of course. In 1934 Sets 1 & 2 cost very slightly less than the MECCANO Nos.0 & 1. So, for a slightly lower price TECNICO sets had the advantage of a higher set number. But what of the contents? The parts have a very different character but perhaps again TECNICO seemed to have an edge with many more N&B and a few more of the other parts. The complicated frameworks in some of the TECNICO models account for the high N&B count in their sets.

The other prices to hand are from Oct. 1946 for TECNICO and June 1948 for MECCANO. Now the 3 main TECNICO sets cost slightly more than Meccano's Nos.2, 4, & 6, and though they still had a narrow lead in N&B, they had appreciably fewer other parts. And the MECCANO sets had Flexible Plates. And the No.6 had Gears in it. And MECCANO accessories included C/W & Electric Motors. And by that time STOKYS was no doubt well established and adding to its range of parts. And TECNICO continued in its mid-1930s funeral way.

A REKORD Set Brief notes on a set seen on Ebay were given in 25/739 and now, thanks to Urs Flammer, a fuller account of his outfit. Fig.1 is the box lid, Fig.2 its centre illustration, Fig.3 the open box, & Fig.4 some of the parts. In fact Urs' set is similar to the Ebay item: the boxes (51*41*2½cm) are identical and at a glance the only differences are: the layout of the parts on the red card; the red Pulleys in the Ebay set; & the 5*3h Perf. Plate in Urs'. More subtle points are noted later. Neither box has any indication of a set number.

The PARTS • **Gears** are aluminium; **all other parts** are nickelled steel. • **Holes** are 4.5mm at 12.7mm pitch, but with some up to 5mm. All are round. • The **thread** is M4 but **bosses** (8.5mm Ø) are single tapped M3.

Below a list of the various types: all can be seen in Figs.3 or 4, but those in Fig.4 are not to exactly the same scale.

• **Strips:** 2,3,4,5,7,9,14h, Twisted 3h but with no centre hole. • **A/Gs:** 5,9,14h. • **A/B.** • **Double Bent Strip.** • **Pulleys:** 28,49mm Ø. • **Tyres** for the Pulleys, the smaller one treaded, the larger smooth (possibly the larger one in OSN 25 was treaded). • **Bush Wheel** 50mm Ø. • **Gears,** Mod.1: **Pinion,** 14t, 16mm Ø; **Gear,** 37t, 39mm Ø; **Contrate,** 37t, 36mm Ø. (The 22t Bevel bottom left in Fig.3 is tapped M4 & is thought a foreigner – the original part was probably the Small Contrate of about 14mm Ø in the OSN 25 set (inset in Fig.4, bottom row)) • **DAS:** 1*5*1; 2*3*2h, the latter back to back in Fig.3. • **Flanged Plates:** 5*9h, with & without the centre cut-out; 5*5h; 5*4h. • **Perf. Plate** 3*5h. • **Axles,** 4.0mm Ø: 30,50,70,90,110,120mm long. One 90mm has threaded ends. • **Crank Handles:** 2 lengths. • **Collar.** • **Wire Hook.** • **Cord,** light brown – similar in both sets. • **Nut,** square, 7mm A/F. • **Bolt,** 6mm u/h with tapered cheesehead. • **Spanner.** • **Screwdriver.**

INSTRUCTIONS There were 3 items with the Set. First, the Z-Z (ZICK-ZACK) manual described in 18/519 except that the press tool ad is replaced by one for the SO Sonder set. Its text is no longer Gothic type, so this would be a later edition. The SO set is shown with 4 layers of parts against 2 in the photo of it on the C2 cover. The missing pages from the OSN 18 version have models for Sets 3 & S.

The other 2 items are Nr.2 Z-Z folded A4 Leaflets. One is exactly as in 27/805, the other differs as follows. The Gantry Crane on the front is replaced by a Tracked Crane from the same set, and 'Zusatzkasten' is rubber stamped on below 'No.2' instead of being printed. A parts list & auxiliary view have been added to the Fire Engine on the back face, and it is now as in the Manual except it is Model 20 instead of 32. The last of the 4 model on the inside faces, Nr.14 Bohrmaschine is replaced by No.14 Bandsäge (all the model numbers after 'No.' rather than 'Nr.').

REMARKS Comparing these parts with those in OSN 27 Z-Z

set, there are many similarities but some differences, the Axle diameter for instance, & the differently tapped bosses. Since both were made by the same company, albeit with 2 owners, more evidence is needed to be sure that the REKORD set, or sets, were simply a phase, probably the last, of the Z-Z story. And if a phase, how the present set fits with the other Z-Z outfits. And how many of the manual models can be made with the Set.

Another REKORD Set Some 20 Ebay Z-Z sets have seen over the years but the only other one with REKORD on it anywhere is the Nr.1 below. The lid is as usual, with no mention of REKORD on it, but an envelope which no doubt contained the parts, has REKORD on it, & a leaflet with the Set has Metallbaukasten Rekord under Z-Z as its heading. The Set's parts were bright Strips, Brackets, & a 5*9h Flanged Plate; 4 red 29mm Pulleys with Tyres; blue 3*5h Flexible Plates with all round holes, possibly plastic; square Nuts; cheese-headed Bolts; & a Wire Screwdriver.



Fig.1



Fig.2



Fig.5



Fig.6



Fig.3



Fig.4

'New' System: BELIX Jean-Paul Meulemans kindly sent details of this Dutch system. The model leaflet right, plus some parts, probably amounting to most of a set, were found in a large lot of TRIX, and though the BELIX parts look at a glance like TRIX there are significant differences in most of them. Nothing is known of the maker but the Leaflet's Intro speaks of BELIX being made in The Netherlands, and that the set is a start-up outfit with additional boxes to follow.

No firm dates are known for BELIX but the spelling of some words in the Leaflet indicates post-1934. From the description '25-ponder' for the Field Gun (Fig.4), the system almost certainly existed post-WW2, and may well date from that time.

The PARTS Fig.2 shows the 8 different types found – they are nearly but not quite to the same scale. Fig.3 is another view of the DAS, and also of the TRIX version. What follows explains how the BELIX parts can be distinguished from their TRIX counterparts (details of which are given in brackets).

Finish. All the parts are steel but the TRIX parts have the commonly found dull zinc dipped finish, while the BELIX parts are chromium plated, or perhaps nickelled.

Holes are 3.8mm Ø at 7.7mm pitch (3.6 at 7.8mm).

The Strips have 5, 10, & 15 centreline holes (5, 9, 13, & 17), and are 1.3mm thick (.85mm). Their width is 15mm, very similar to TRIX.

The 3 Discs are 33, 17, & 10mm Ø (28, 16, & 10mm), with 10 outer holes (8) in the Wheel Disc. The radial pitch of the Wheel Disc's outer holes is 12mm (10mm). In passing, I had only recently realised that a TRIX Strip, etc could be bolted to a pair of the outer holes in the Wheel Disc, and then, from Jean-Paul's material, that the spacing of these holes was probably intentional. However a calculation showed that the radial pitch actually needed to be 10.2mm to give the 7.8mm spacing, and measuring some TRIX parts to hand (postwar

British and 1980s German) gave about 10.3mm. Then if the BELIX outer hole pitch was to be rigorously 7.7mm, the radial pitch would need to be about 12.2mm.

The DAS. Their hole patterns differ with the BELIX base having rows of 3, 4, 3 holes (4, $\frac{1}{2}+3+\frac{1}{2}$, 4) and each lug, a diamond of 1, 2, 1 holes ($\frac{1}{2}$, 2, 1). Thus the BELIX lugs are noticeably longer than in the TRIX part.

Other parts which are needed for the Leaflet models are

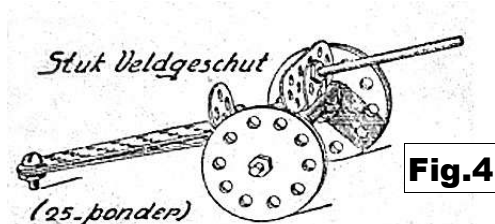


Fig.4

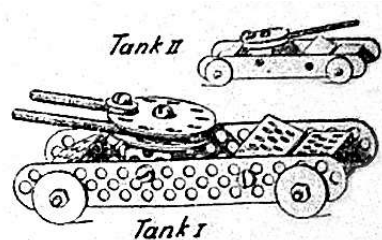
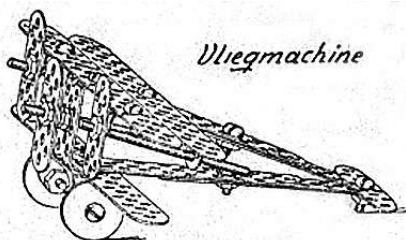


Fig.1

N&B, and Screwed Rods. Cord & a Wire Hook are also used.

The SET The parts in the Lot were 4 of each Strip, 4 DAS, 4 Wheel Discs, 4x 17mm Washers; 2x 10mm Washers; & 1 Spanner. If all these parts were in the Start-up set it had some extra parts compared with the TRIX No.1/Unit A outfits: 2 Strips, 2x 17mm Washers, & a 10mm Washer.

The MODEL LEAFLET, 39*23.4cm, is printed on one side only. Its models would need all the parts found in the Lot so they were very likely all from one set. A few of the models have similarities with prewar TRIX, some of which needed Sets 1+1A, but most look to be original. Below a few that caught my eye, at about their original size, and in B&W for clarity.

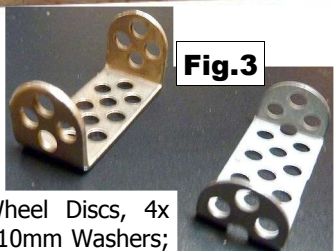


Fig.3

CONSTRUCTION in 2013, courtesy the Eitech website, & a catalogue downloaded in March. 17 new sets have been added since 2011 (see 45/1360) & 13 discontinued. The interesting or novel new outfits include several attractive Cars, some agricultural machinery, a Jet Airliner, & a Marble Run.

The **2013 range of sets** is 05,09,10,11,14,15,16,17,26, 28,29,32,35,45,47,51,57,58,59,61,62,63,67,68,69,71,74,78, 81,83,84,89,92,400,420,500,1000. The 'blue' sets are marked by Eitech as new for 2013; the 'red' ones were also not noted in 2011 and so were probably added in 2012.

The New Sets Their packaging remains much as before. There are numerous special parts in the new models, and the Curved Strips which first appeared in the Big Wheel (see 41/1231) are used in a number of them. 1 or 2 alternative models can be made from many of the sets, and they are often quite similar for the Cars, open & closed versions for example. All the R/C models are 2-channel. As is the Eitech norm, none of the models, except the Marble Run, right, are motorised, though as before it is suggested that some can be powered using one of the Motors listed separately. Several of the sets include a small plastic Man to 'drive' the models. He is blue with a yellow face and may just be visible in the Combine's cab (Fig.7).

No.10 is the 46cm wingspan Airliner in Fig.4. It has a retractable undercarriage and its 570 parts include enough to make an optional stand. **No.14** (Fig.2), variously named as Hotrod & Classic, is for 2 models with steering from 370 parts. Its headlights are, as on several of the new models, yellow coloured Bolt heads. **No.16**, for young farmers, has 1000 parts for a Combine (Fig.7) or an attractive Tractor & Trailer. Both look to have steering though whether it is linked to the Combine's cab seems doubtful. And it's not clear if the Combine does anything other than look the part.

No.26 (Fig.3) offers 2 small, neat R/C models which are largely made from special parts. **No.29** named Jeep, has 400 parts including a Charger, for 2 unJeeplike, bulky, bruiser-style, R/C models. They have LED lighting. **Nos. 51, 59, 62, 69** are small sets for, respectively, a Forklift, a Motorcycle, a Quad-bike, & 2 Mobile Cranes. All run on the small Road Wheels or similar, and are respectable if rather unexciting models. **No.71** has 135 parts for a small Solar Helicopter with the Cell as the rotor. **No.78** is another Solar set. Its 210 parts include a rectangular Cell to power either a pretty Roundabout, or a 3-bladed Wind Turbine, or (what might be) a rotating Radar Dish.

No.81 has 150 parts for 3 variations of a small Tractor & Trailer. **No.89** has 250 parts for 3 small, tracked Bulldozers. **No.400** has 740 parts packed in a wooden box to make the 70cm high Space Needle in Fig.5. Little is said of it and it can't be seen if it has a lift or if the top deck rotates. **No.420** (Fig.6) is a nice mini Space Needle. **No.500** has 1100 parts for the Marble Run in Figs.1 & 1A, or for 2 similar models. It is 72cm high, with 10 Balls on its 4.9m of track. Fig.1A (including the corner of the box at top left) shows what looks to be an Archimedean screw to take Balls from the end of the track to the chain lift. 2x AA batteries power the Motor but is it a special unit? And what is the purpose of those Perforated Spheres? **No.1000** is called the Black Edition and has 550 parts for the R/C Car in Fig.9. The set's name comes from the parts specially finished in matt black. Only 3000 of these sets will be produced.

The Deleted Sets, 08,19-21,23,25,34,55,56,72,73,75,80, are as follows, with the Issue in which they were described in brackets. **08**, a largish Forklift (40/1224). **19**, a small Tipping Lorry. **20**, a 500-part tracked Mobile Crane (40/1224). **21**, a 360-part tracked Front Loader (41/1231). **23**, a 350-part R/C

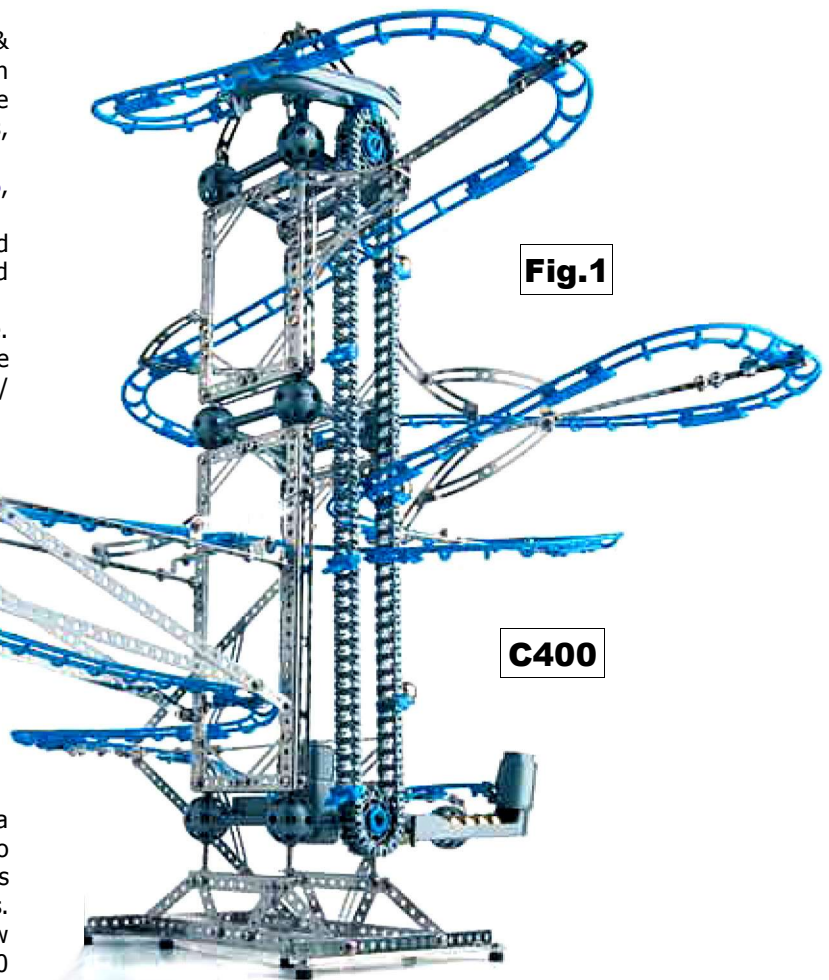


Fig.1

C400

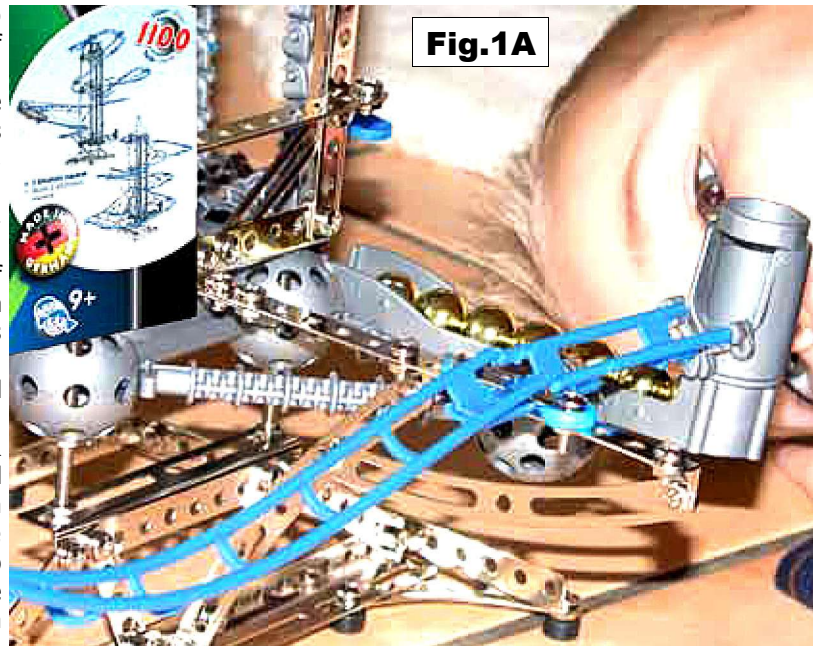
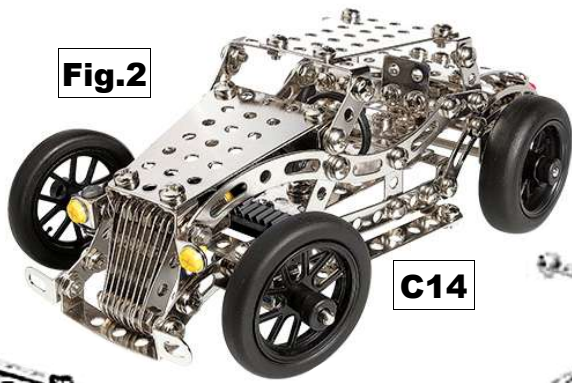


Fig.1A

Car (37/1107). **25**, a 690-part Car (41/1231). **34**, the large Eiffel Tower with illumination (44/1330). **55** (Fig.8), a small 'simplicity' Loco & Tender, new in 2009 (41/1231) but not noted as such at the time. **56**, a very small Tractor & Trailer (44/1330). **72** & **73**, Solar sets for 188/300-part Helicopters (30/885; 37/1107). **75**, another Solar set for 2 small aircraft at the ends of a rotating arm (43/1323). **80**, a small Tractor & Trailer (41/1231), again not noted there as new.

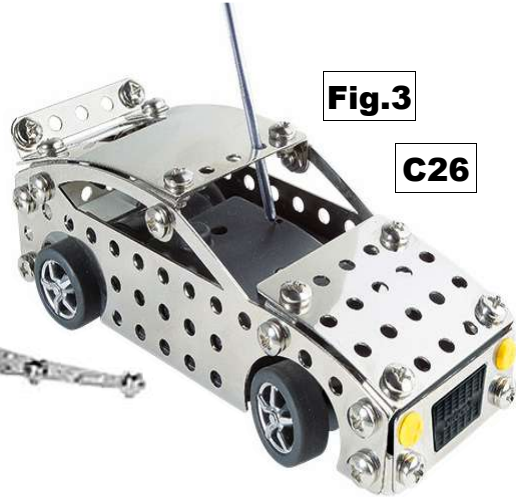
The Accessory Packs continue unchanged; **the Add-on Sets** too except that 130 (Motor & Gears) & 133 (Gears & Chain) have disappeared and 143 with flashing LEDs has been added.

Fig.2



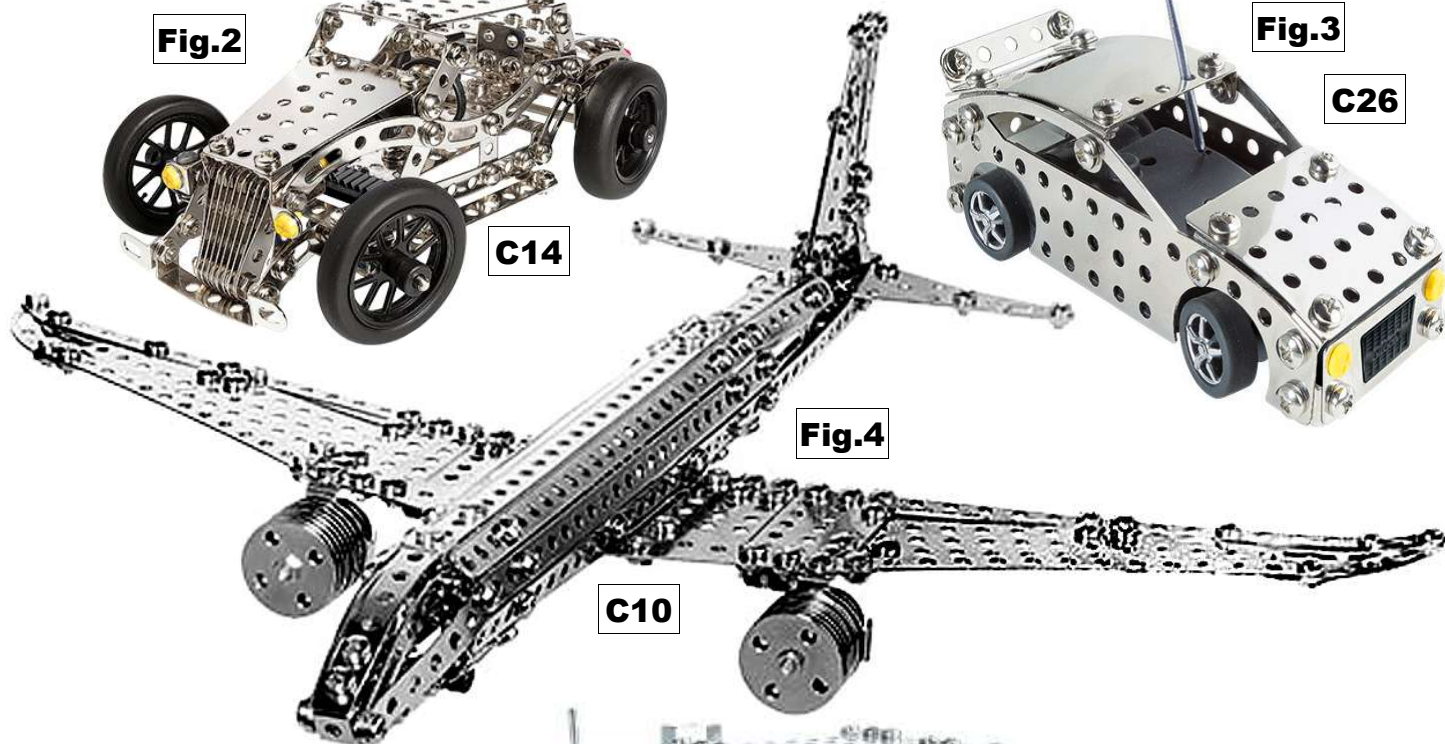
C14

Fig.3



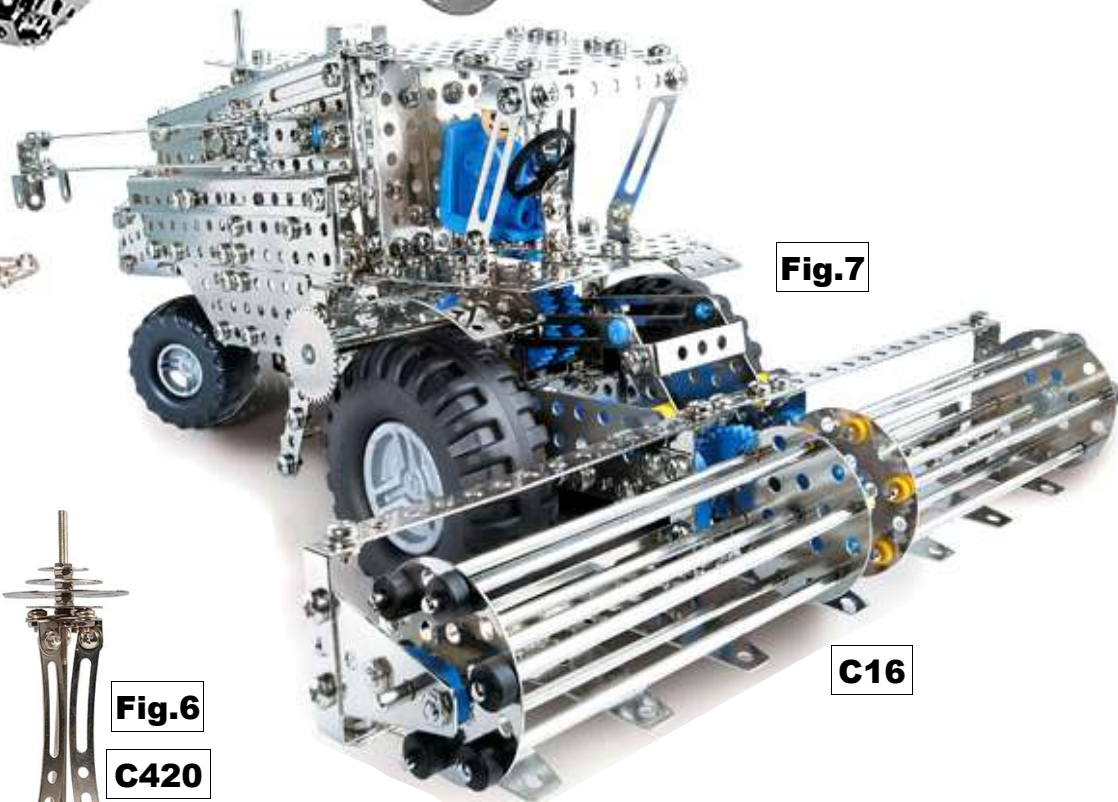
C26

Fig.4



C10

Fig.7



C16

Fig.6

C420



Fig.8

C55



C55

Fig.5

C400



Fig.9



C1000

'New' System: REX

by Jacques Pitrat

Meccanico Italiano REX is an Italian system named for an ocean liner, whose image occupies most of the picture on the lid (right). The liner was no doubt named in honour of the King of Italy (Rex means King in Latin of course) who christened her in 1931. She was extremely popular in Italy, and deserved it because she was large, beautiful, and very fast: in

1933 she won the blue riband given to the passenger liner crossing the Atlantic Ocean in regular service with the highest speed. For Italian boys, she was the symbol of the marvels of engineering, and it would have been natural to call a construction system after her.

Fig.2

There is no indication of the maker, either on the box, or in the manual. There is also no indication of date, but the seller said that REX was made in 1934. This is likely, at that time the Rex was at the peak of her glory, she lost the blue riband in 1935. This system was certainly not made after her destruction during WW2.

The lid label displays only one model made with the system: a plane diving toward the Rex. Little did the artist imagine that the liner would be sunk by rockets fired from planes 10 years later.

My SET is a No.5, packed in a cardboard box, 40.5*31.5*2cm with 17 compartments (Fig.2). The lid label measures 23*15cm. Nowhere is another set explicitly mentioned but it is likely that there was at least a very small set: most of the models in the manual are devised for such a set, similar to a MECCANO No.0. Also, although all the manual models can be made with my set, I cannot exclude the possibility of larger outfits because the manual is made with sheets stapled together and it would have been easy to add more pages.

The PARTS The diameter of the holes is 3.5mm and the pitch is 12.0mm, so the system is not compatible with MECCANO although many of the parts look rather similar. The thread is 3.4mm diameter. Most of the parts are nickelled steel. The Pulleys & Wheels have no boss: they are fastened with Nuts to Screwed Rods.

The parts are shown in Figs.2 & 3 and are listed below. As



Fig.1

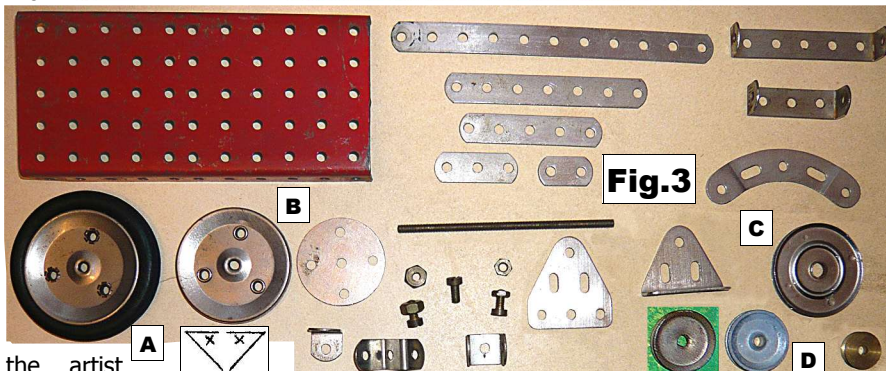


Fig.3

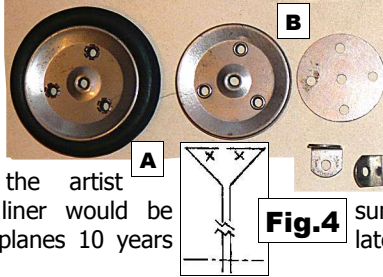


Fig.4

sunk by later in

some of those in the Set are missing, I have not indicated their quantities.

- **Strips:** 11h, 7h, 5h, 3h, 2h. They are 12mm wide and both holes of the 2h are round.

- **DAS:** 1*3*1 & 1*5*1h.

- **Curved Strips, Stepped,** like the #90a MECCANO part.

- **Brackets: Double, Angle, Reversed Angle.** All their holes are circular.

- **Trunnions & Flat Trunnions** with 3 holes in the base, one at the top, & two oval intermediary holes.

- **Flanged Plate, 11x5h,** painted red.

- **Road Wheel (Fig.3 'B'), 44mm** diameter. The discs are formed as in the sketch (Fig.4) below the part in Fig.3. The 3 face holes are too small for the Bolts; they are used only to fasten both discs together.

- **Road Wheel (Fig.3 'A') 44mm** diameter. The discs are as above but without the outer 'tread' ('x' in Fig.4). This leaves a 'V' for the tyre to sit in but the part without the tyre cannot be used as a pulley because there is a gap between the 2 discs. The

Tyres are still in excellent condition, and unlike most of those made at the time it is possible to remove them.

- **Pulley ('C'), 37mm** diameter. It is slightly suspect because its centre hole is oversize (it is large enough to take a MECCANO Rod).

- **Pulley, 25mm** diameter. Two of this dia-

meter were in the Set. The steel one is inset in Fig.3; to its right ('D') is one made of aluminium, and probably not original.

- **Pulley, 15mm** diameter, made of brass.

- **Wheel Disc, 34mm** diameter, with 4 circumferential holes.

- **Screwed Rod, 85 mm** long.

- **Nuts & Bolts** Brass cheesehead Bolts & hexagonal Nuts. The diameter of the Bolts is 3.4mm with a shank length of 7mm. Curiously enough there are two kinds of Nut, almost half of them are large while those of the other half are small (in my set 20 large & 27 small Nuts remain). All of them mesh perfectly well with the Bolts, and both types can be seen in one of the manual models. Their width & thickness are in mm: 8.0 & 4.0 for the large ones, 6.2 & 2.0 for the small ones. The reason for this diversity is not clear: perhaps there were two makers, or they thought that for some situations it was easier to have large nuts while in others it was better that the Nuts were less noticeable.

- **Tools,** none remained in the box.

- **Quality** Not too bad, and most of the parts are not rusty.

The **MANUAL**, right, is in Italian, and is made from 6 sheets, 245*165mm, stapled together on one side. It does not included the set contents or a description of the parts, nor the parts necessary to build the models.



Fig.5

The manual seems to have two sections. The first four sheets have 79 very simple, unnamed models, including the 26 letters & the 10 numerals. The last two sheets show 11 more complicated models (including the Plane on the lid), with names but without instructions. All of them can be made with the contents of my set; they use at least two flanged plates, when at most one was used in the models on the first four sheets. At the bottom of the eighth page, three lines seem to conclude the manual: they indicate that it is possible to build many other models from the many parts & Bolts in the Set.

Figs.6a & b are 2 of the larger models; 3 more (the named ones) are shown on the p9 of the manual in Fig.7, with 6 of the smaller ones inset around its edges. Fig.6c is another small one. All are about 75% of their original size and have had their fawn (as in Fig.5) background changed to white.

The representation of the parts in the models is not very good. As examples, on the Plane, the Wheel Discs have 8 holes, the number of holes of some Strips & Flanged Plates is incorrect, all the holes of the Flat Trunnions are round, and one hole is missing from one Trunnion.

The only mechanical feature in any of the models is a cord drive as in Fig.6c, but even then the cord itself isn't shown, nor a crank handle, though one could have been easily made with a Wheel Disc nutted to a Screwed Rod. The larger Fig.6b Windmill has no means of driving the blades at all.

It would certainly be possible to build more interesting models, for example although there are many Pulleys, there is

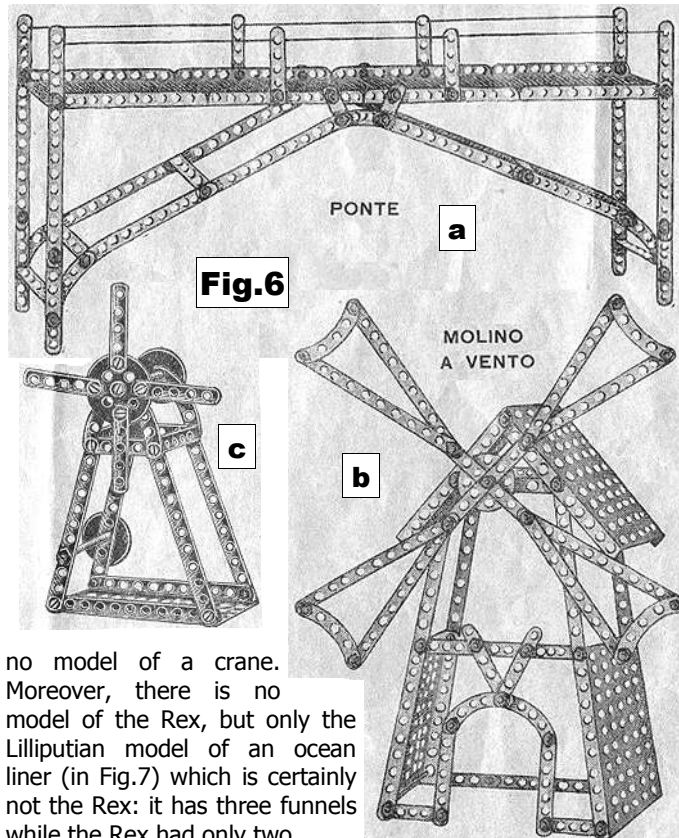


Fig.6

no model of a crane. Moreover, there is no model of the Rex, but only the Lilliputian model of an ocean liner (in Fig.7) which is certainly not the Rex: it has three funnels while the Rex had only two.

REMARKS This system is not a good copy of MECCANO, it lacks too many useful parts. The contents of the Set are rather limited. For instance, there is no A/G & the longest part has only 11 holes. We can also wonder why 4 Flanged Plates were put in such a small set, even if they are used in some of the models, in Figs.6a & b for example. The models are not very interesting. No wonder that it is very rare to find REX sets.

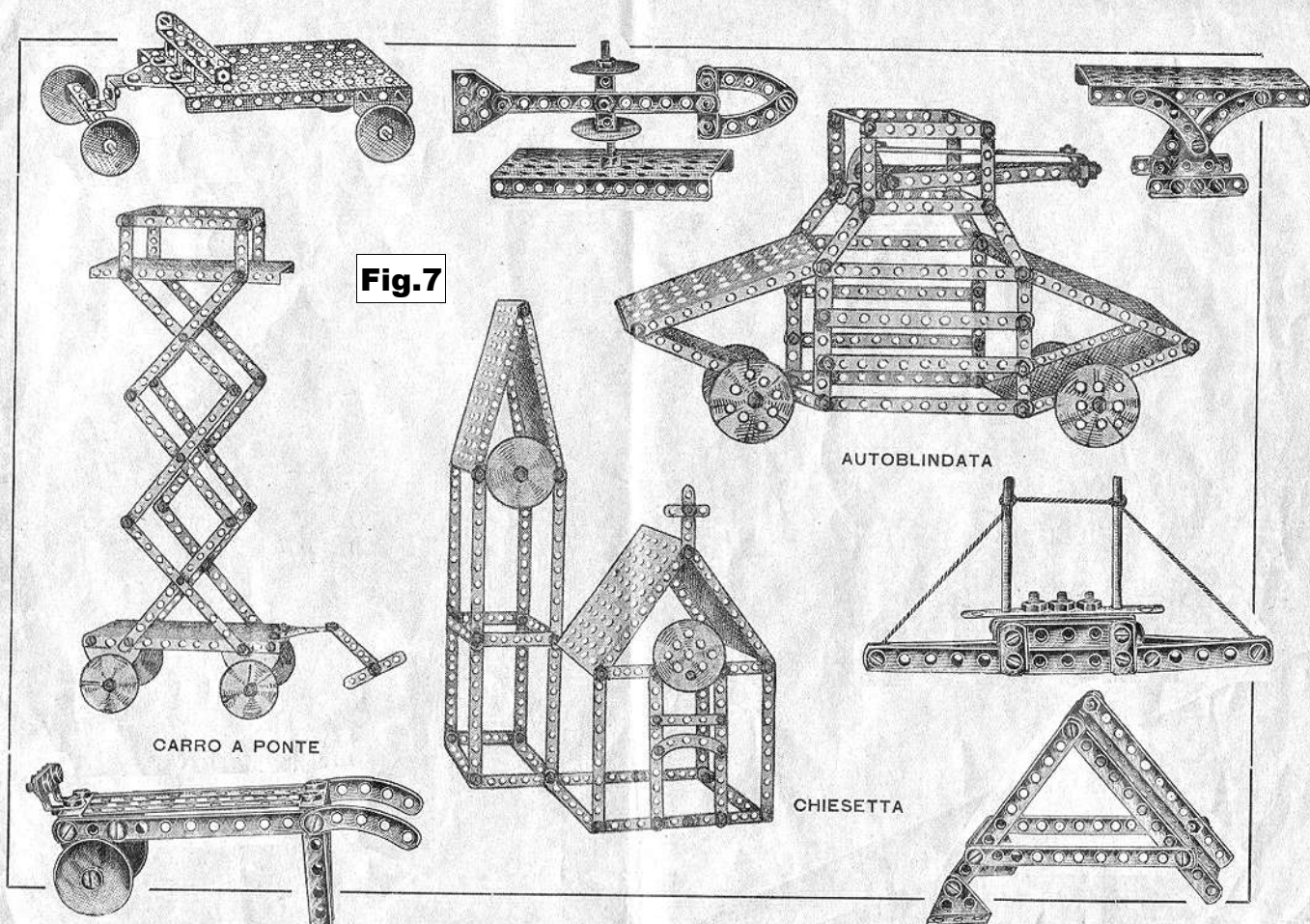


Fig.7

HAMÉ not NAME In 47/1420 I got several things wrong about a 'new' Dutch system which I called NAME. The name was the first mistake, it should have been HAMÉ. These errors have come to light thanks to Jean-Paul Meulemans, and he sent other information including the address of a website about Dutch toys called HONG (Historical Overview Dutch Games). It has photos of 2 HAMÉ sets which can be found by searching for 'hame' at hong.vlinden.com/ and going to page 3.

Hamé doesn't mean anything in Dutch, and as far as is known isn't associated with the maker. The latter is given as Fabriek Van Technisch Speelgoed, Eindhoven at the bottom of the lid's yellow panel, see OSN 47. This panel also has the Set No. under the name at the top.

The other important error was to say that the set shown had 2 layers of parts – in fact there were 2 single-layer sets in similar boxes.

One of the HONG sets is a No.1, seemingly complete, the same set as the one with the Flanged Plate in it in OSN 47. Its box, 32*23cm, & its lid label are the same, as indeed they are for all the sets mentioned here. The parts in the Set are shown in Fig.1 (its right side matches the left). The parts not shown in OSN 47 are the Trunnion (with 2 holes in its base), the longer Screwed Rod, & the Spanner (its head is cranked). Scaling gives the Road Wheel as 41mm Ø, the Wheel Disc as 38mm Ø, & the Rods as 40 & 103mm long.

A label like the one below but with its 18 models arranged slightly differently, nearly fills the inside of the lid. It says along the bottom that 10 of them can be made with the Set, but not which ones. A number of the models need parts not in the No.1: 11h Strips, a Crank Handle, Flat Trunnions, & 2 Pulleys.

2 other sets have been seen, each like the lower one in OSN 47 except that both have a Spanner between the top of the Sector Plate and the 8h A/Gs (they are not 7h as stated in OSN 47). In one of the sets all the Strips are 12.5mm wide, the

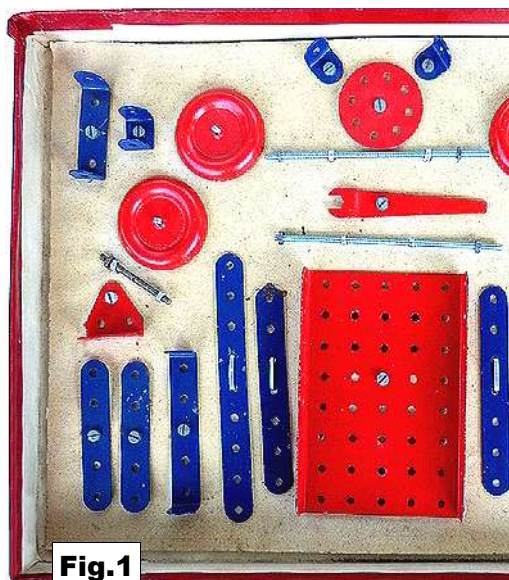


Fig.1

width of the DAS in OSN 47. The model sheet in this set is the one below. These 2 sets, & the OSN 47 one, are described as add-on outfits (Uitbreidingsdoos) and are something of a mystery. All have No.1 on their lid labels but it has been overwritten in each case. It can't be deciphered for the OSN 47 set, for one other it is 2A in green pencil, & for the third 1J, or possibly 2J, in blurry green. Judging by their content the sets seem very unlikely to have been the first add-on to the No.1, & what could 'J' denote? Perhaps the '1' had a sticker over it originally & the written changes were by previous owners, the green a coincidence. A coincidence too far? Probably.

The bottom of the OSN 47 open box can't be seen but from the other sets the parts on each side of Sector Plate (it is 5h long & has side flanges) are a 7h Strip, 2x 3h Strips, a 1*5*1h DAS, 2x 5h Strips, & a 4h Strip.

Including those in the models, the 29 different parts are now: 2,3,4,5,7,9,11h Strips; 3,5,8,11h A/Gs; an A/B & a D/B; 1*3*1 & 1*5*1h DAS; a Trunnion & Flat ditto; a 5*8h Flanged Plate; a 5h long Flanged Sector Plate; a 3*5h Perforated Plate; a 5h long Girder Bracket; 2 Pulleys (if confirmed); a Wheel Disc; a Road Wheel; 2 Screwed Rods; a cheeseheaded Bolt (holding some of the parts down) & a small hexagonal Nut.

Thank you to Joke Waalre, the owner of the Set in Fig.1, and to HONG, for permission to use the photo of it. Thanks also to Jan Ringnald of the Documentatiecentrum Meccano Gilde Nederland for sight of photos of his Set.

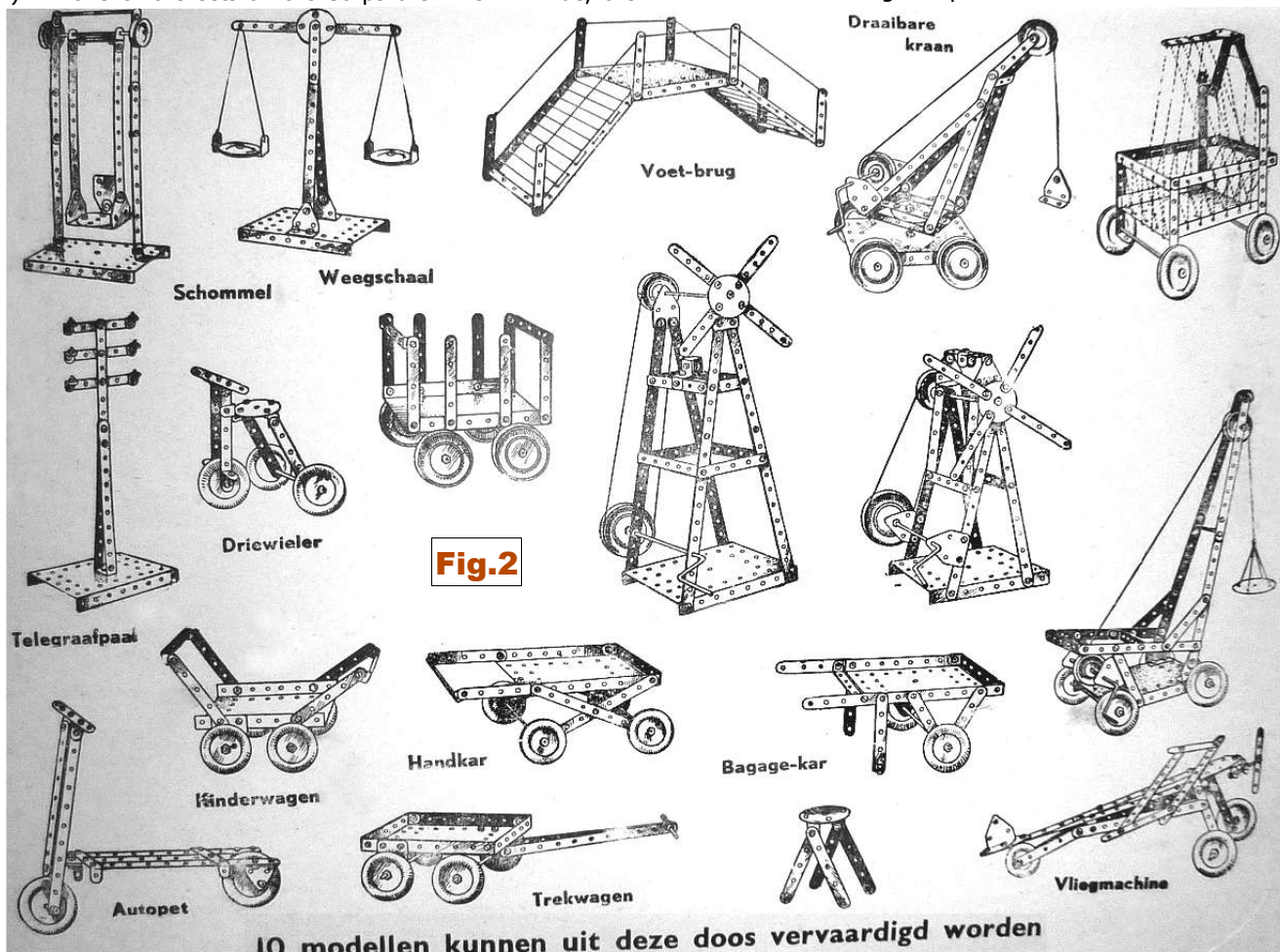


Fig.2

10 modellen kunnen uit deze doos vervaardigd worden

VULCAIN in Colour A 1934 B&W ad for this (presumably) clip together French system was shown in 18/500 and now Jean-Pierre Guibert has kindly sent scans of 3 more pieces of 1934 'paper'.

One is a letter, dated November 1934, from the company, Société "Édifice", A. Méricant & Fils, Avenue de Châtillon, 29, Paris (14^e). It draws the Cher Client's attention to the 1934 Tarif and in particular to new introductions: L'ÉDIFICE – MODERNE, a coloured version of the company's well known wood & card building toy, & to VULCAIN, a new metal system with Plates in different colours, which it was claimed, allows the most faithful expression of elegance & realism. Further, the easiest & fastest 'invisible' assembly of the Plates was promised, without N&B, and within the capability of young children.

The second is a 1934 price list which lists the sets in OSN 15 except the Boîte Luxe No.3, but has in addition 3 Mécanisation outfits (at Frs 15 each) called Pneus et Access-

oires, Poulies, & Plaques perforées. Jean-Pierre has another Price List, also dated 1934, which has just the OSN 15 sets.

The third is a leaflet in colour introducing L'ÉDIFICE – MODERNE and VULCAIN. The 2 pictures for the latter are shown below; the text repeats the claims in the Letter. The road-side trees & fencing in Fig.2 would be parts from the L'ÉDIFICE range of accessories.

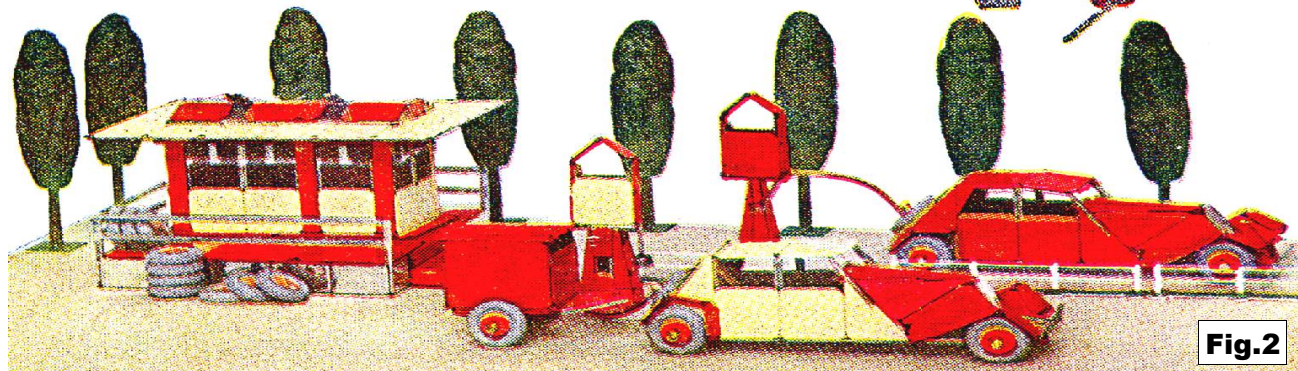


Fig.1

Fig.2

VULCAIN: S1

OSN 48/1472

Snippet. New System: GIRDER & PANEL BUILDING SET

Panels in Girder frameworks are used to make buildings for use with S-scale ($\frac{3}{16}$ " to the foot) American Flyer model trains. Two sets were offered on Ebay before Xmas by a seller from Kansas City called THESPREEKC. His website, americanflyerexpress.com offers custom made trackside accessories. It was said that the sets were a limited run but that more would be produced if the demand was there. The system's name is taken, perforce, from the case below, even if it is something of a mouthful. It has no mention of the maker.



FIG.1



FIG.2



FIG.3

ERECTOR instructions and headed ERECTOR (in its original branded typeface) ARCHITECTURAL CONSTRUCTION.

The sets were offered on Ebay until mid-January at \$125 each, with some unsold at that point. Later a set for 2 buildings similar to the centre block in Fig.3 was offered and reached \$61. In April there was a set at \$50 (in a white cardboard box) to make 4 small buildings, each the size of the end models in Fig.3. They are in a similar style too except the one right with the different Window & Door Panels, and the advertisement.

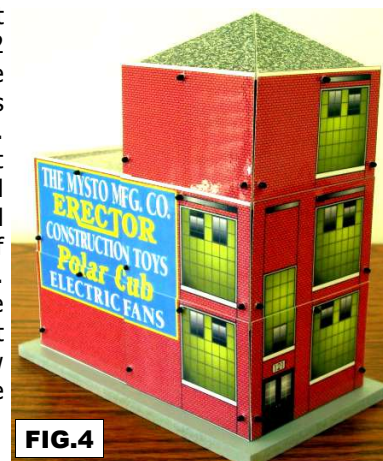


FIG.4

The system caught my eye because at a glance the Panels looked like the 1930s ERECTOR Architectural Panels. In fact they were the inspiration, along with black plastic Girders based on the KENNER parts. Actual ERECTOR Panels were copied, reduced in size to $3\frac{1}{4} \times 2\frac{1}{8}$ ", and laminated. New Panels were also created, for the pitched roofs for instance, and the models sit on wooden Bases.

Two sets were available, one for the Skyscraper in Fig.2, 22" tall & 10" wide. The other had parts for the group of models in Fig.3, with 132 Girders, 64 Panels, 3 Bases, plus 4 Flat & 3 Hip Roofs. The centre block is 10" wide & $8\frac{3}{4}$ " tall.

Each set had an 8-page model leaflet based on the original

GIRDER & PANEL BUILDING SET: S1

OSN 48/1472

'New' System: WÜRTH The logo on the two sets in the next column is that of the German Würth Group, a worldwide wholesaler of fasteners, fittings, tools, systems, etc, etc. Thank you to Urs Flammer for details of the Sets.

The W04 set right was a 'special edition' made by Eitech for Würth in 2006, and the model looks similar to one of those on the lid of the 2006 Eitech C16 outfit shown in 35/1062. The style of 'CONSTRUCTION' on it is the same too. There were 5 WÜRTH sets, 01-05, shown on the underside of the box. The 01 & 03 are like two on the C16 lid models, the 03 & 05 are in the same vein but the 03 is an artic with a large white cylindrical Tank on its trailer, and the 05 is a 6-Wheeler with a crane mounted on the load platform.

A 'Chinese' Set which probably predates the W01-05 outfits above. It is shown right with the manual lying on the box lid (it covers more dark blurry shapes).

The manual shows that the parts and manual models are almost identical to those of the STIHL set described in 32/961. The Tools differ but otherwise the only change is that the Strip parts & the A/G are black instead of blue. These changes are reflected throughout the manual and in the parts in the Set.

Comparing the WÜRTH & STIHL manuals, the differences are as follows. The front covers have different models, and of course different logos. The Intro has been slightly reworded to eliminate all mention of STIHL. The models are the same (they do not include the rather rudimentary Power Drill on the WÜRTH cover) except that the Strip parts & A/G are shown black. One of the 'black' models is shown below. Apart from the colour change, and the Tools being shown in a space on C3 that was blank in the STIHL, the Illustrated Parts are the same, with the same quantities. The wording on the back cover is 'Distributed by Würth Holding Switzerland'.

Of the 5 models on the WÜRTH lid, only 2, the Racing Car & Helicopter, are among the manual models. They were among the 5 small photos on the STIHL lid, all 5 of which were in its manual, and one wonders how the 3 'foreign' models ended up on the WÜRTH lid. Was there perhaps originally a leaflet with



FIG.1



FIG.2

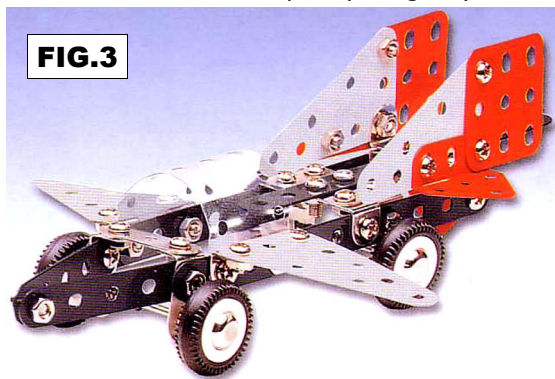


FIG.3

the set which had larger photos & parts lists for them.

The STIHL Tools were not shown in the manual but were described in OSN 32 – the WÜRTH ones are quite different and



FIG.4

are shown above – both look to be commercial items and 'Germany' can be seen on the Spanner. They look rather expensive items for a set of this calibre but perhaps they were Würth tools included to improve the image of the product.

OSN 48/1473

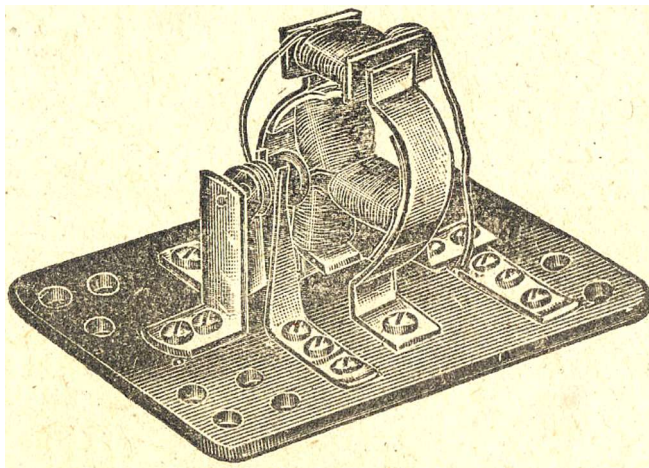
WÜRTH: S1

BESI Jean-Pierre Guibert kindly sent details of this German set from around 1960. One Ebay item suggested that BESI might date from the 1930s, perhaps because the instructions are mainly in the old Gothic script.

The box, 197*165*17mm, is red and marked Nr.1, but no others are known. The parts, and the N&B etc in a small fawn envelope, are tied to a green backing card. There are 12 different parts in all to build the 8v Electric Motor right.

The Base is red fibre, about 19*7cm, and most of the other parts are nickelled. Holes are 3 & 4mm, and the thread M3. The Shaft is 3.2mm Ø with its ends reduced to 2mm. The coils have to be wound by the builder with 220-230 turns on the Stator and 120 on each arm of the Rotor.

The lengthy instructions are pasted inside the lid. They are shown in J-P's *Encyclopédie* entry together with photos of the box lid, and the parts in the box.



OSN 48/1473

BESI: S1

COLUMBUS Jean-Paul Meulemans now owns the Ebay set that was the subject of a Snippet in 41/1254, and he kindly sent details of it. It is an unusual type of system, and perhaps unique in having structures made of Rods which push into rolled sockets at the ends of Strips, A/Gs, & Brackets.

The maker given on the lid label, right, is Columbus G.M.B.H., Berlin-Charlottenburg. Nothing more is known of the company, but the system was patented in Germany by Anton Gerstadt, 5 Goslarerplatz, Charlottenburg on Dec. 21, 1922. *Baukästen* does list a Columbus but as a wooden system from a different firm in Freiburg.

Also on the label, Schraubenloser Metallbaukasten [Screwless Metal Building Set], and the same in English & Spanish. Also D.R.G.M. (trademark registered), D.R.P.A. (patent applied for), & AUSL. PAT (patented abroad).

The SET Its box, 61*33*3cm, has no set number (but its sides are covered in tape) but its contents match those of a No.3 listed on the back cover of the 'manual' (actually loose sheets in a folder). The layout of the parts was shown in OSN 41 but the circular parts are in fact on an L-shaped card which lifts out to reveal 9 compartments with Rods in them.

The PARTS The Illustrated Parts from the manual is shown in Fig.2 (the 2 sketches bottom right show methods of sliding tight sockets off Rods), and Fig.3 has examples of the various types of part. The Pulleys are probably zamac (all have suffered from zinc pest); the other metal parts are steel, most probably nickelled. The parts are listed below with my names, notes on their uses, and quantities in curly brackets. Those asterisked are not shown in the Illustrated Parts but are used in the models and (apart from the Hook) are in the Set. In the manual models the key dimension of the different parts in

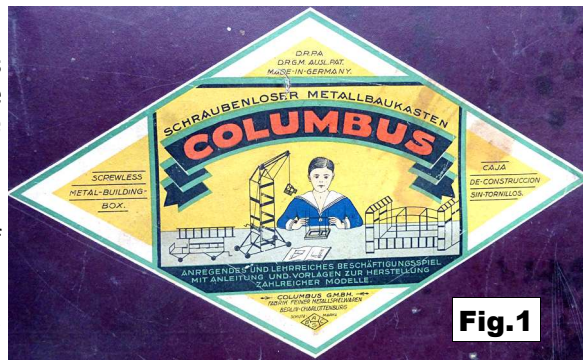


Fig.1

centimetres is given after the part's letter designation.

Rods, 2.5mm Ø. **#S** are 50,40, 28,20,14,10,7,5,3,2cm long {6, 8,12,12,18,20,12,12,12,12}. **#F:Z-form**, 8 & 11cm long o/a but are shown as F5 & F7 in some models; **U-form**, 8cm o/a {16 total}. **#B: Crook** {4}. **#DL: Pivoted** {1}. Large-radius Curved Rods, not in the

Set, are used in one model and are labelled B28 (see Fig.9).

Strips, **#L**. 12mm wide & 28,20,14,10,7,5,1cm long {8,8,12, 24,12,24,12}. 4 of #L10 & 4 of #L5 have a centre hole which is used as a bearing for a Crank Handle etc, as in Fig.5. In one model #L14 is shown with a centre hole.

A/Gs, **#W**. 14,10,7,5cm with 12mm wide flanges {4,4,4,4}.

Corner Bracket, **#E** {48}. **Ditto**, **Offset**, **#Ev** {12}. #Ev allows Rods to cross at right angles, as in the stocks of the sails in Fig.5. It is also used as a bearing (for the Crank Handle in Fig.7 for example) and all the parts in the Set have one socket larger than the other for this purpose.

Sleeves, **#H**, **Wide & Narrow**. Used as spacers & axle stops {24 total}. The Wide part is also used as a rod connector.

Crank Handle*, **#Kw**. 2 sizes, 16.5 & 20.5cm o/a {1,1}.

Pulleys, **#R**. 42 & 26mm Ø {6,6}. The larger one can be made fast by 2x #L1 on the shaft supporting a Rod through a face hole, as in Fig.10a.

Hook*. See Fig.7.

Cord. Not seen. {3m}

Wheel Disc*, **#Sch**. 32mm Ø {2, but 4 found in the Set}. It can be made fast to a shaft in the same way as the 42mm Pulley – as in the winding drum in Fig.7.

Mallet*. Provided to tighten sockets if they lose their grip {1}.

G-Clamp*. See Fig.2 {1}.

Mounting Plate. Wooden, with holes to take Rods, and which suit the length of some of the Strips {1}. It is only used as in Fig.2, not in the models.

Pliers. Not mentioned anywhere but found in the Set and would be useful in adjusting the grip of the sockets and in pulling them off Rods.

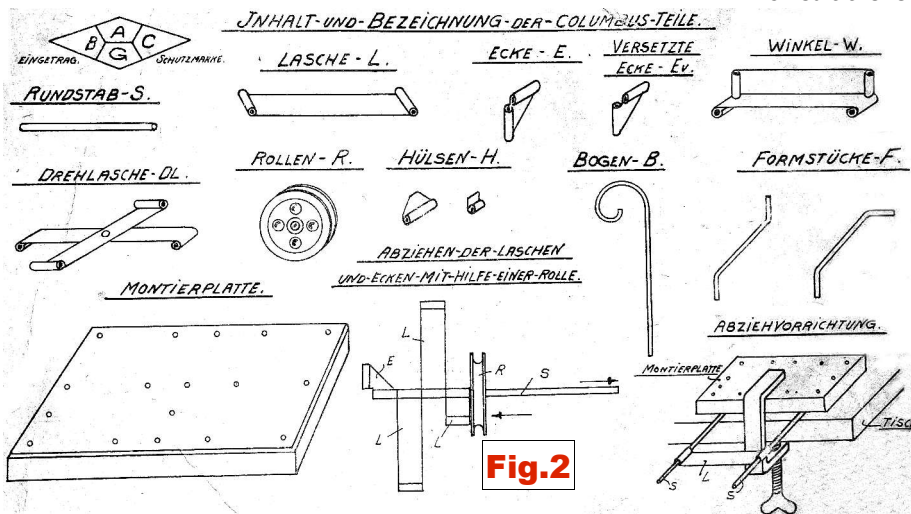


Fig.2

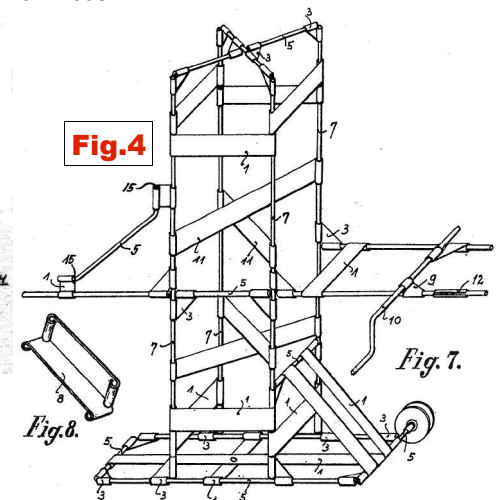


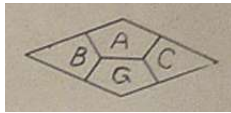
Fig.7

Fig.8



Fig.3

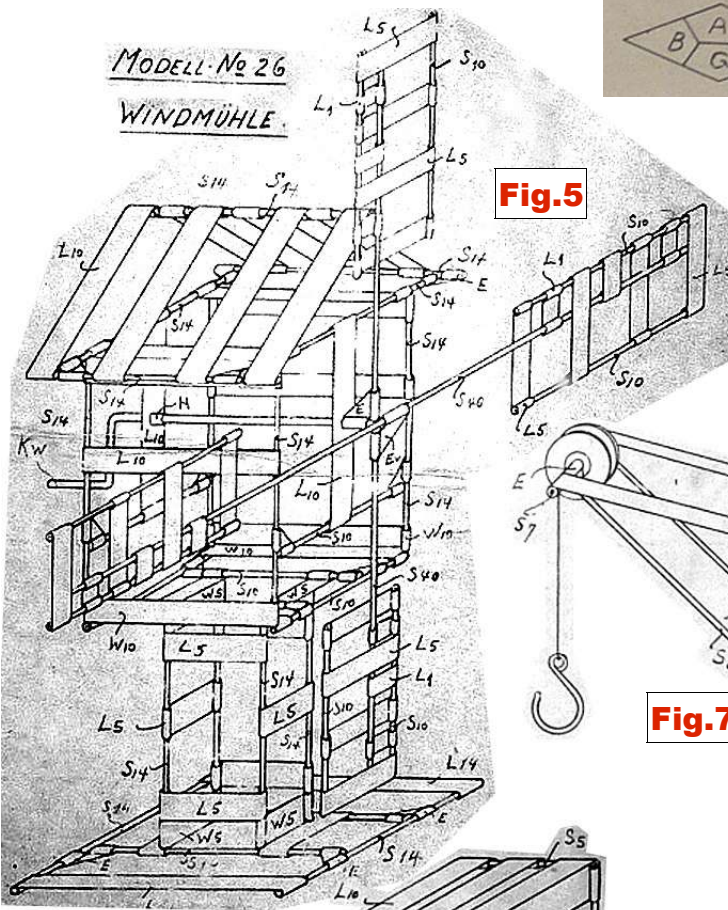
The PATENT All that is known of the German patent is its date. The UK patent was 208698 & the main parts covered by it are shown in the figure above. That's to say, the parts S, L, E, Ev, W, R, H, & F in Fig.2. The main claims are (a) the two types of the Corner Bracket, and (b) the lengths of Strips, Rods, & A/Gs increase by a factor of $\sqrt{2}$ to allow rigid structures by cross bracing. The claims do not include the use of sockets in joining the parts. Although Corner Brackets are used as bearings in the Figure nothing is said of the need to



MODELL-№ 26

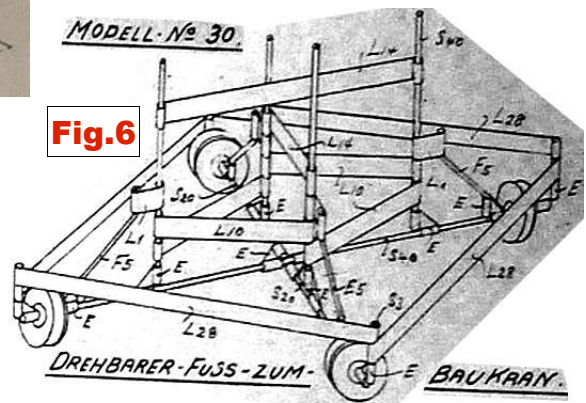
WINDMÜHLE.

Fig.5



MODELL-№ 30.

Fig.6



MODELL-№ 24. EINFACHER-AUSLEGERKRAN.

Fig.7

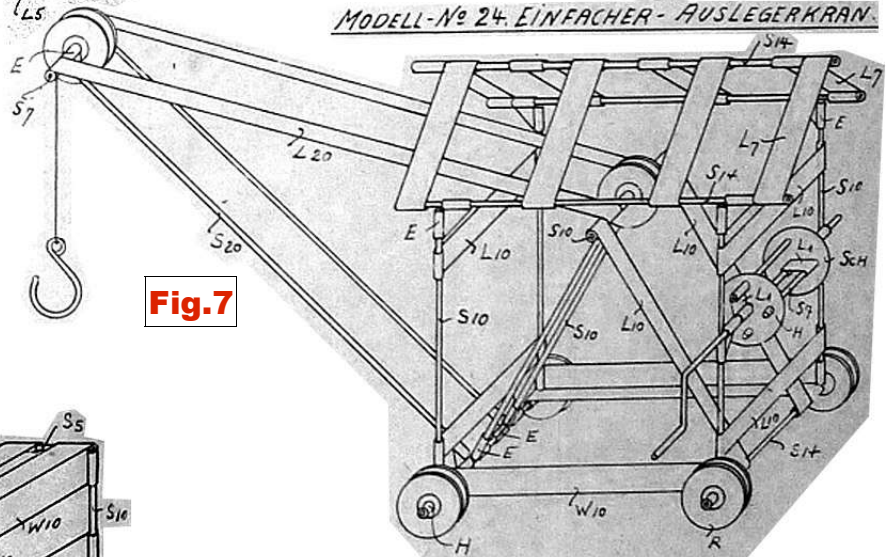
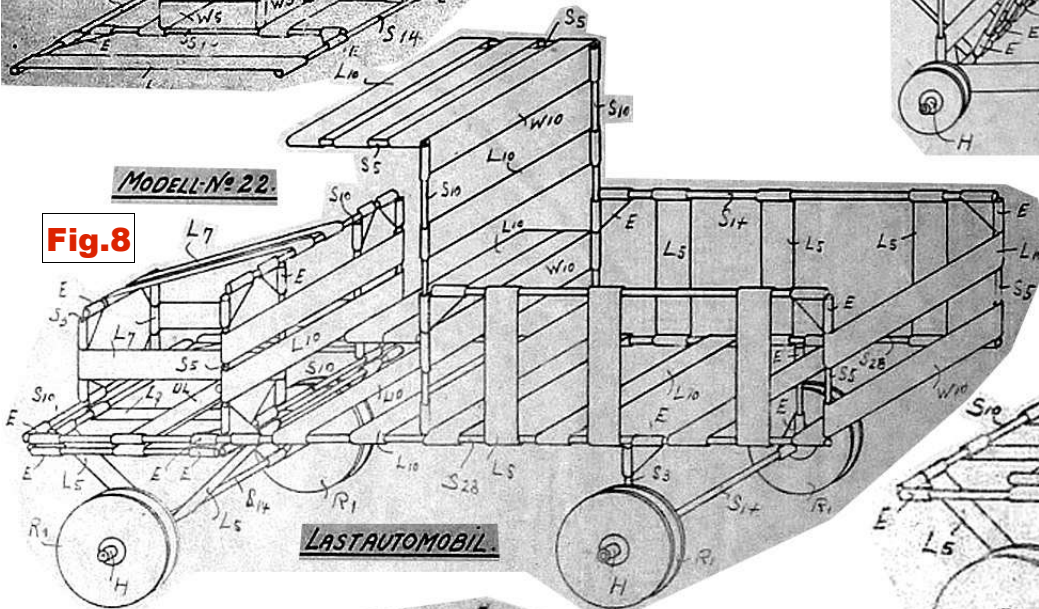


Fig.8

MODELL-№ 22.



MODELL-№ 23.
DREHACHSE
ZUM-LASTAUTOMOBIL

Fig.8a

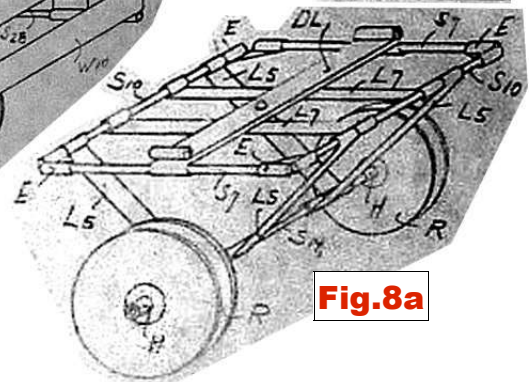


Fig.9

MODELL-№ 31.

FAHRBARES-DREH GESTELL-ZUM-
ZUM-BAUKRAN.

Figs.5-10 are shown in
B&W at about 60% of
their original size.

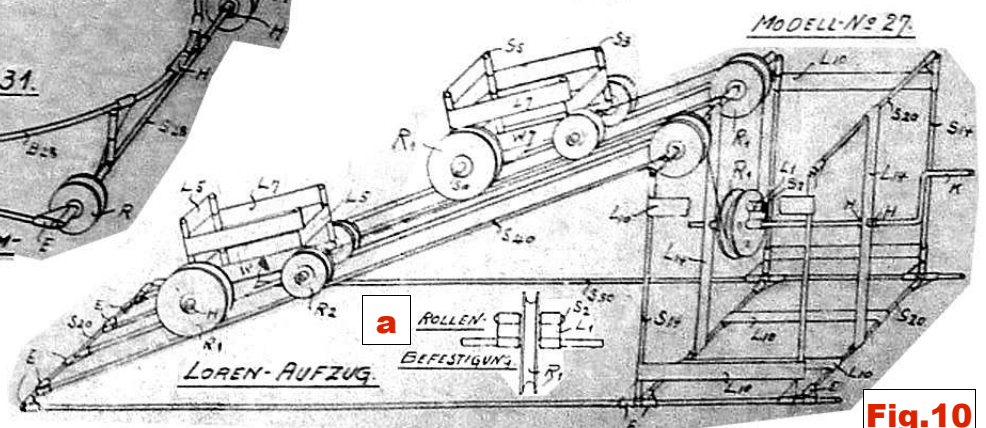


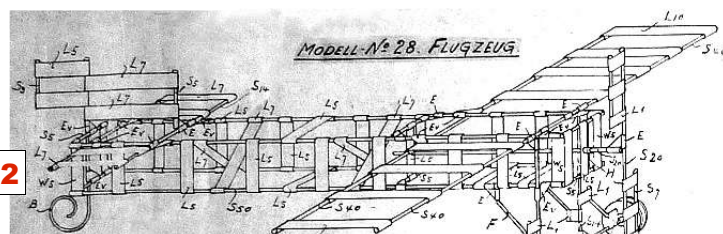
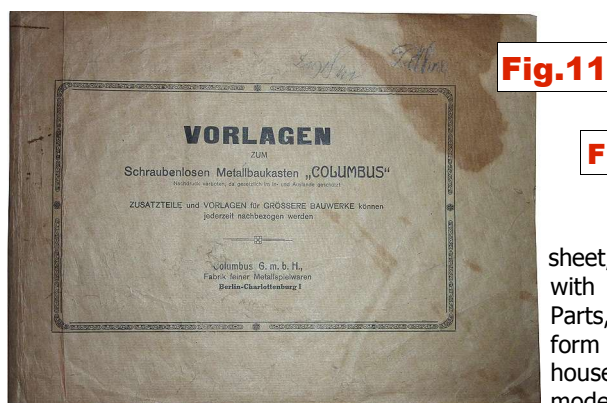
Fig.10

a ROLLEN-
BEFESTIGUNG

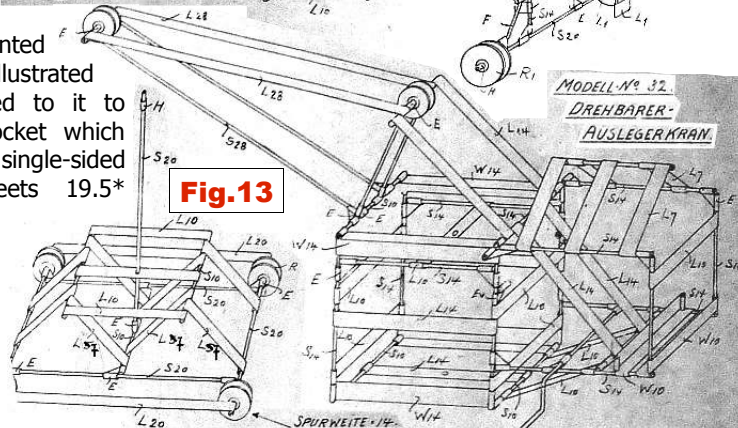
enlarge one socket to take a Rod. Nor is there mention of Strips with a centre hole although a hole is shown in the long Strip in the base. Or perhaps it is a Pivoted Strip, another part

not mentioned in the text.

The MANUAL The front cover is shown in Fig.11, C2 has some building advice, & C4 the No.3's inventory. C3 has a

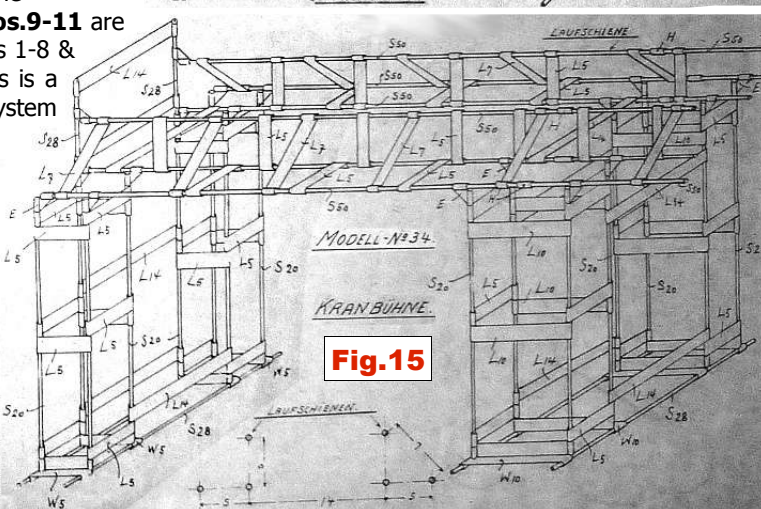
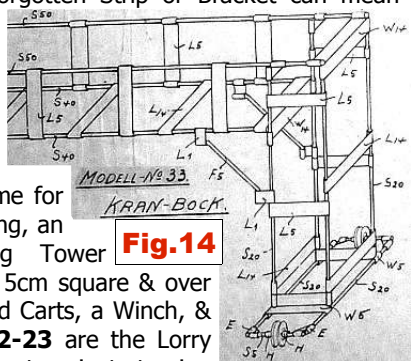


sheet, printed with the Illustrated Parts, glued to it to form a pocket which houses 15 single-sided model sheets 19.5*

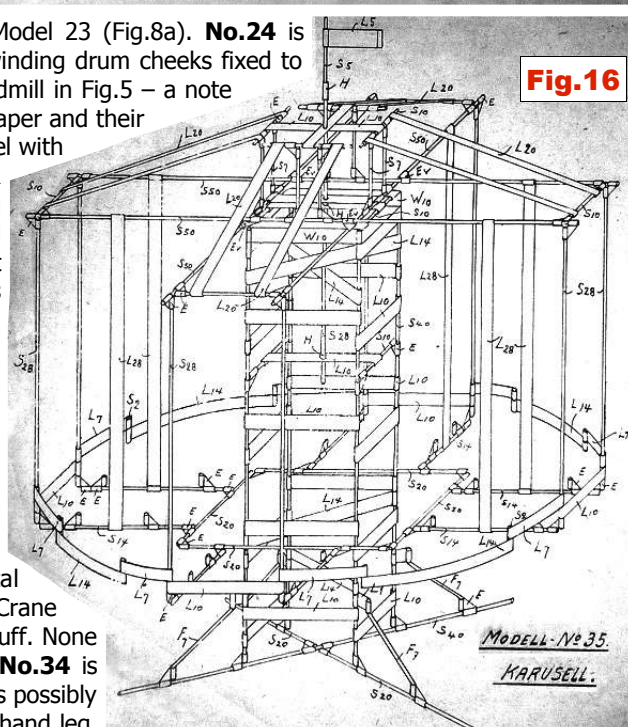


31cm. There is a line drawing for each of the 35 numbered models, with a few auxiliary views. Examples are shown on the previous page, and small drawings of some of the larger models on this page.

Models 1-7 are quite simple with a Chair, a Bed, a Sledge, etc. **No.8** is a simple House with walls made of horizontal Strips suitably spaced apart. This spacing is necessary to leave room for the Strips forming the adjacent walls to be fixed on the vertical corner Rods. **Nos.9-11** are simple Luggage Trucks. A list of parts is given for Models 1-8 & 11 in the order in which they are to be assembled. This is a good idea because one of the problems of this type of system is making sure that all the parts are on the Rods in the right order – a forgotten Strip or Bracket can mean major dismantling. **Nos.12-21.**



ling. **Nos.12-21.** Fairly straightforward models: 3 types of track for a Crane to travel on, a Display Frame for posters etc, a Swing, an elaborate Lighting Tower with a framework 5cm square & over 30cm high, 2 Hand Carts, a Winch, & a Seesaw. **Nos.22-23** are the Lorry in Fig.8, with its centre pivot steering



in Fig.8, with its centre pivot steering shown as Model 23 (Fig.8a). **No.24** is the Crane in Fig.7 with, as on several of the Manual's Cranes, the winding drum cheeks fixed to the Crank Handle. **No.25**: a fairly rudimentary Bus. **No.26**, the Windmill in Fig.5 – a note with it says that the sails will turn in the wind if they are covered in paper and their angle adjusted. **No.27**, the Funicular Railway in Fig.10, the only model with a 'mechanism', even if it is only Cord around a Pulley fixed to a Crank Handle. **No.28**. The 40cm span Monoplane with rectangular flying surfaces in Fig.11. The fuselage is 5cm square, 50cm long, and without any taper towards the tail, doesn't look right. Pluses are that the rudder could be turned, and the tail skid, a Crook #B, looks rather magnificent. **No.29** is a Travelling Crane with a simple 20cm jib fixed atop a 40cm high, 10cm square tower mounted on a 20*28cm wheeled base. **No.30** (Fig.6) is a Base for a Rotating Crane which could replace the travelling base of Crane 29. **No.31**, a Slewing Base (Fig.9), could presumably have the No.30 Base on it, thus allowing travelling & slewing. **No.32**, a Crane (Fig.13) with a longer 28cm jib attached to a 28cm long cabin. They can slew about a vertical spindle built into the travelling base. **No.33** is a 50cm long travelling Crane Gantry. It is symmetrical and the right side is shown in Fig.14. Judging by the bracing across the base of the horizontal boom there would be a crane rather than a crab travelling along it. Crane 24 would be the right width but would need to slew and, ideally, to luff. None of the Manual Cranes luff but it would not be difficult to arrange. **No.34** is another Crane Gantry (Fig.15) but with fixed legs and a boom which is possibly 100cm long, and if so either extends as a cantilever beyond the righthand leg, or is supported by a third leg at its end. The track width is as No.33 but the boom's design would the leg in the centre of the boom would allow a load to pass through it. **No.35** is the Roundabout about 40cm diameter. and has 4 pairs of arms which rotate above the 10cm square section centre deck, suspended from them, has pick-up points for, it is suggested, Seats or Benches. Quite an intricate design, but it has no form of drive to rotate it.

REMARKS No other sets are mentioned in the Manual but it would be reasonable to assume that there were smaller outfits. And perhaps one or more larger to provide (a) the Curved Rods #B for one model (Fig.9), and (b) the parts needed for the at least one, but probably more, manual models for which a No.3 would have insufficient parts.

No system directly comparable to COLUMBUS comes to mind but EREKTIT/BILDICO from around WW1 (see 46/1413) is perhaps not dissimilar in scope and in its reliance on structures made from Rods gripped by sockets. Both systems had attractive looking, shiny parts but neither included any parts which would allow their models some degree of mechanical sophistication. Even so EREKTIT made better use of its Cord & Pulley to control some of its models. Bracing is always a problem in systems of this type & neither has all the answers.

COLUMBUS's '√2' parts are ideal in structures such as those of Figs.4 & 15, but with Clips & Swivel Clips positioned along Strips or pairs of Rods, EREKTIT at least allows the possibility of bracing a Crane jib or the like. It should be said though that this as not a feature of any of the EREKTIT manual models. Tapered frameworks are another problem for both systems but again EREKTIT looks to have the advantage.

The COLUMBUS manual included a good range of models but EREKTIT was more ambitious in terms of machinery & plant. Where COLUMBUS won hands down was in the relative quality of the drawings of the manual models – not perfect but far and away better than the small, unclear EREKTIT sketches. Another COLUMBUS advantage was the smoother look of their models, particularly the smaller ones, due mainly to the untidy look of unused sockets in the EREKTIT Clips.

OSN 48/1477

COLUMBUS: S5

More on SSS Some information on this Dutch system was given in 42/1266 and now Jean-Paul Meulemans has kindly sent more details. He owns 3 outfits, a No.1, a No.2, & a No.3, and the latter, the largest in the range, contains parts not shown in OSN 42. In particular A/Gs, and these are unusual in having a single row of holes in each Flange.

No firm dates are known for SSS but Jean-Paul wrote that the language used in the manual makes it unlikely that it was before 1950. Also, one of the manual models is called Jeep (Fig.3B) so it was certainly after WW2.

The SETS The boxes measure 30*20½, 35*25, & 40*30cm. The latter has 2 layers of parts and like the No.2 in OSN 42, the parts are tied individually to blue backing cards. The contents of the sets are given in Fig.2 with my English names alongside.

The PARTS are made of aluminium with a matt finish, about 1mm thick. Fig.1 shows the main types of part not illustrated in OSN 42, with the Bonnet on the right; others are a Collar, Washers, and N&B. **Holes** are all circular, 3.6mm at 8.0mm pitch. **Strip parts** are 15mm wide. **A/Gs** are 4,8,12,16h long. **DAS**: its lugs have 3 holes, likewise the A/B. **Bonnet**: the top face is formed into a shallow vee. **Washers**: 10 & 16mm Ø. **Wheel Disc**: 32mm o.d. **Axle & Crank Handle**: 3mm Ø, treated steel, 75 & 50mm (the shank) long. **Screwed Rod**: 3mm Ø, brass, 70mm long. **Collar**: brass, 9mm Ø, 7mm wide, double-tapped. **Bolt**: plain steel, 5mm Ø round-headed, 10mm u/h. **Nut**: brass, square, 5mm A/F. **Pulley**: 37mm Ø with a boss that matches the Collar.

The MANUAL has 16 landscape pages 22*14cm. The models are shown as a photo on a black ground, with the parts needed listed in a panel on the outer edge of each page. The 4 pages to hand show 11 models including the two here (Figs.3A & B, at about their original size, with the parts list for both starting at C). The others are all more or less typical small models, though with the Bonnet & A/Gs used to advantage in several of them.

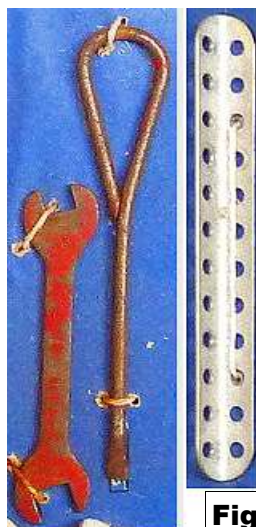


Fig.1

Onder-deel Nr.	Benodigd voor Model Nr.	
	16	19
S. 17	6	
S. 13		2
S. 9	4	6
S. 5		6
HS. 16		
HS. 12		
HS. 8		2
HS. 4		
DH. 5	3	
EH. 2	6	2
HH. 3		2
D. 10		1

C

Fig.2

Strip
Strip
Strip
Strip
A/G
A/G
A/G
A/G
DAS
A/B
Hook
Bonnet
Flanged Plate
Washer
Washer
Wheel Disc
Axle
Crank Handle
Screwed Rod
Collar
Bolt
Nut
Fast Pulley
Spanner
Screwdriver

ONDERDELEN				
Onder-deel Nr.	voorradiq in doos Nr.			
	1	2	3	
S. 17	4	6	10	
S. 13	4	6	10	
S. 9	4	6	10	
S. 5	4	6	10	
HS. 16			4	
HS. 12			4	
HS. 8			4	
HS. 4			4	
DH. 5	4	6	10	
EH. 2	4	6	10	
HH. 3	1	1	2	
D. 10			1	
P. 15		1	1	
V. 10	2	4	8	
V. 16	2	4	8	
W. 1	6	6	12	
A. 75	1	2	5	
Z. 50	1	1	2	
DR. 70	4	4	8	
KL. 1		3	6	
Schr.	20	25	46	
Moeren	18	18	36	
HW. 1	2	2	4	
Sleutel		1	1	
Schr.d.		1	1	

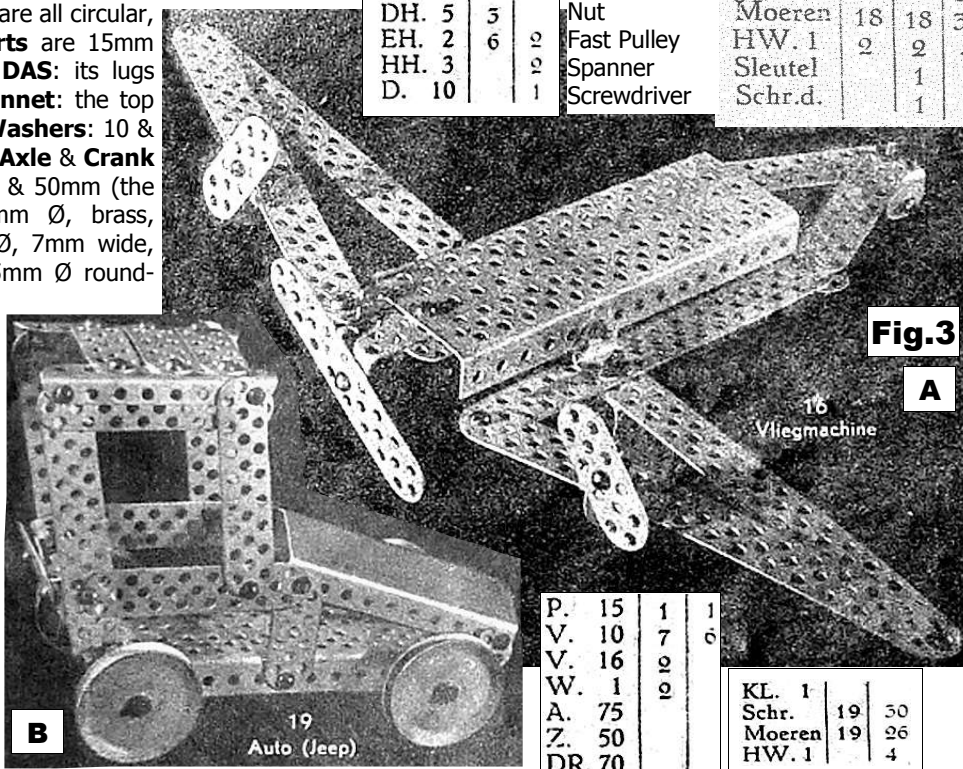


Fig.3

A

B

19
Auto (Jeep)

P. 15	1	1
V. 10	7	6
V. 16	2	
W. 1	2	
A. 75		
Z. 50		
DR. 70		

KL. 1	19	30
Schr.	19	26
HW. 1		4

OSN 48/1477

SSS: S2

BOJA A blurry model sheet from this small East German system was shown in 43/1319, and now Urs Flammer has kindly sent details of his Nr.3 outfit. It is unusual in that although some of the parts remind one of STABIL, they are much larger, with the holes at 20mm pitch.

The Set is shown right: the box is 38*24*3cm with its model sheet glued on top of the lid. The only indication of the set's name & size is that it says along the bottom of the model sheet that the models are built from Boja Set 3 (also that the sheet is a makeshift presentation).

Each part is shown in Fig.2 with the diameters of the Wheel & Pulley Discs, and, apart from the N&B, the quantities in the Set if greater than one. The threaded parts (M4) are steel, the others 1mm thick aluminium. Strips are 20½mm wide with holes 5.1mm Ø. The Nuts look brassed and are 8mm A/F. The Gears have 18 & 8 teeth, and are 3 DP. They would mesh at 2h spacing.

4 of the Sheet's models are shown below (the Lorry & Loco are labelled 'Mit Kasten 1, 2, 3'). With the 20mm parts the Lorry would be some 15" long. The other models are a Railway Wagon, an Electric Truck, a Motorcycle & Sidecar, and 4 machine tools. The drawings are unclear but the Gears look to be used in the Press (Fig.3D) and possibly in one or two of the other models.

The 11 models in the Sheet were among the 15 on the OSN 43 version. The 4 additional ones are too blurry to be seen clearly but they include a Crane, and a model with a built-up flywheel, perhaps an engine of some sort. The OSN 43 sheet was probably a later version because it had lists of the parts required for the different models, and some extra views in several cases.

Urs found a reference to BOJA in the East German newspaper Neues Deutschland of 14 December, 1946. It said, under the headline Lehrbaukästen aus Eisenach [Educational Sets from Eisenach], that '10000 metal building sets, to be used as illustrative material for teaching physics, are to be made in the next few weeks by Boja GmbH in Eisenach. The 256 parts in the kit can be assembled into 20 different working models [Maschinenmodellen]. They will allow important laws of mechanics to be demonstrated.' The set would have been significantly bigger than the Nr.3.

Fig.1

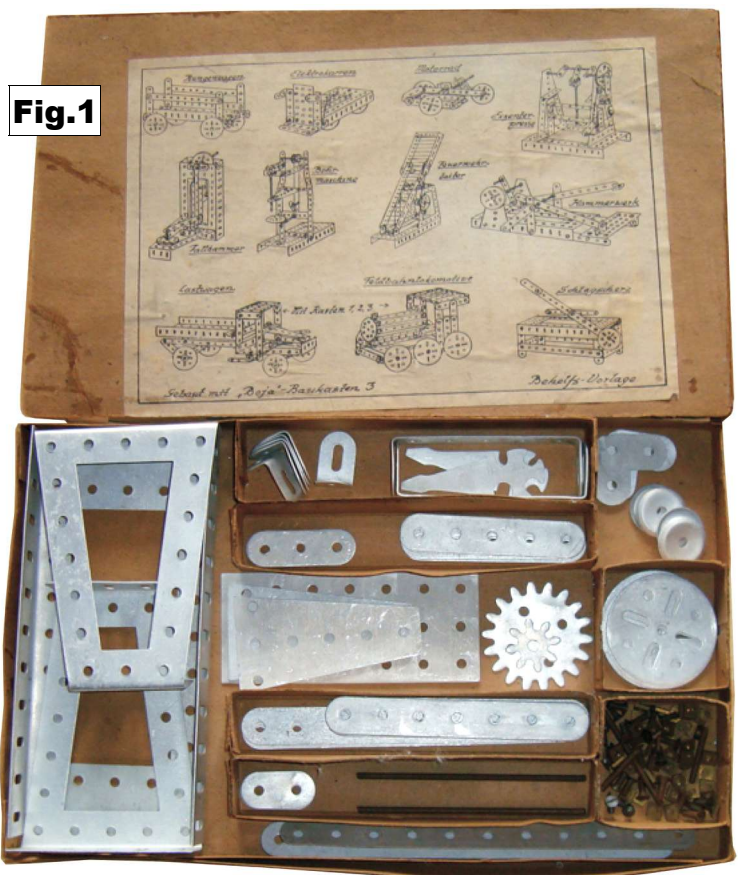
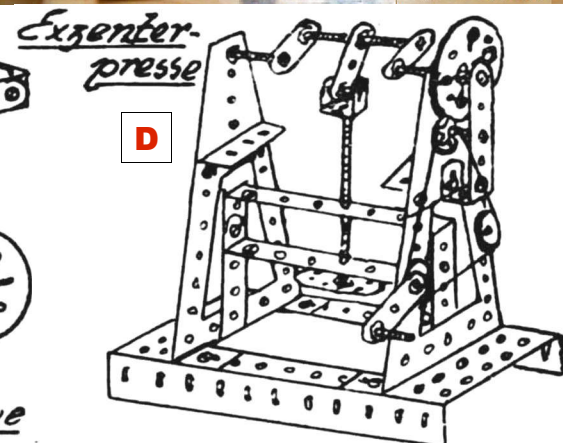
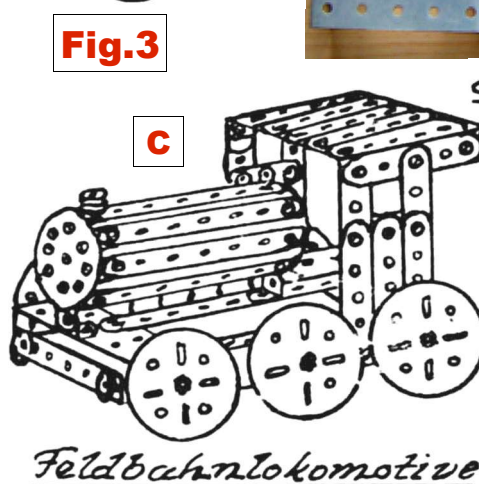
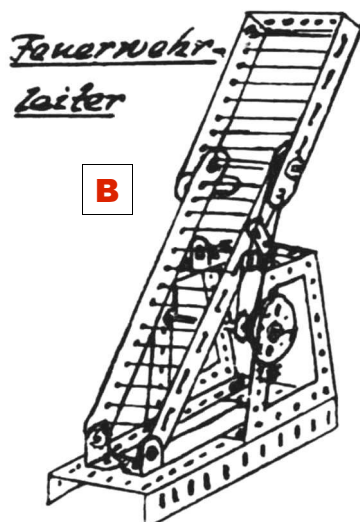
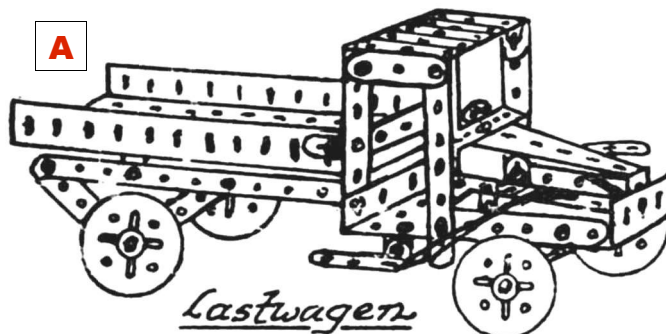
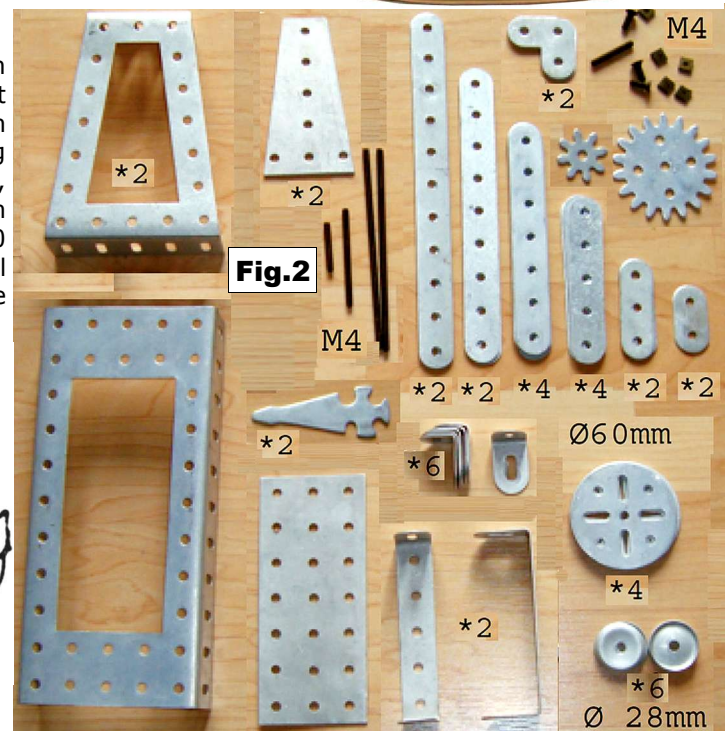


Fig.2



TANÉRT Educational Outfits These sets were made by 'Tanért 1 Sz. Mechanikai Gyaregysége' at Debrecen (a city in the east of Hungary). From the internet it seems that TANÉRT was the 'National Company for the Production and Sale of Teaching Aids', and '1 Sz. Mechanikai Gyaregysége' is rendered by Google as: No.1 Mechanical Manufacturing Unit.

This note is about two different sets and thanks are due to Erik Beek for sending details of them. The Sets were developed, probably well before 1960, for use in schools, and were not sold in toy shops. At a glance many of their parts look similar to the East German CONSTRUCTION but in fact the pitch of their holes is 20mm (against 10mm) and the N&B are 6mm diameter.

Erik wrote that in Germany & the Balkan states metal building parts, CONSTRUCTION in many cases, are used in specific primary school lessons, and that at present METALLUS is also used in secondary schools. In the past sets specifically intended for schools were used, and they included more specialised sets, but less is known of them. The first Set is:

TECHNISCHER BAUKASTEN für Hilfsschulen, Klassen 2-6 Two examples, both for German language markets, are known. Erik's was bought in Prague, the other, belonging to Jean-Paul Meulemans, in Germany, and they differ only in the manual that was with them. The one with the Prague set was in Hungarian and, as will appear, was from a different set. The present set was developed for use in Hilfsschulen, that's to say schools for children with moderate learning difficulties or motor disabilities. Each pupil had a set and the teacher followed every step/error/goal, with progress being recorded in a very detailed index system. The Set was used in both East & West Berlin and Erik was told in Prague that it was already in use in 1960, and that in 1995 it was replaced by a more versatile and less expensive system. The



Fig.1

the Collar is not in this set and a 5*5h version of the Flanged Plate isn't shown – it was missing from both sets but can be seen in other Ebay sets & is needed for the manual models. Also omitted from Fig.2: an 11h Strip, a Hinge (inset in Fig.3) & a Washer. Holes that can't be seen clearly are

round except in the flanges of the Flanged Plate. **Material/Finish:** metal parts, generally 1.4mm thick, are nickelled; the orange parts are plastic. **Holes** are 6.2mm Ø & 14.5mm pitch. **The thread** is M6. **Bosses** are 14mm Ø & 14.5mm long. **The Set Contents** are given in the manual, as follows, with my names, a few notes, and the quantities in curly brackets. **Flanged Plates**, 5*5, 11h {1,1}. **Strips**, 20mm wide, 15, 11, 9, 7, 5, 4, 3h {4,4,4,8,8,4,4}. **A/G**, 11h {4}. **A/B**, 2*1h {4}. **Corner Bracket** {4}. **DAS**, 1*5*1h {6}. **Flat 'U' Strip**, 2*5*2h {2}. **Sector Plate**, 3*5h {2}. **Hinge**, similar in style to M212a {2}. **Double Bent Strip** {4}. **Screw-ended Rods**, 140, 60mm {2,6}. **Axle**, 5.85-6.00mm Ø, 165mm {2}. **Crank Handle** {1}. **Circular Plate**, 115mm Ø {1}. **Face Plate**, 115mm Ø, double-tapped boss {1}. **Road Wheel** with a flat rim, 80mm Ø {4}. **Pulley, Fast**, 50, 25mm Ø, single-, double-tapped (a thin **Rubber Ring** is not listed, but is actually fitted to the 50mm version) {4,1}. **Pulley, Loose**, 18mm Ø {2}. **Winding Drum** {2}. **Wire Hook** {2}. **Bolts**, 10, 30mm {50,6}. **Nut** {60}. **Wing Nut** {8}. **Washer** {10}. **Axle Stops**, rubber, 5mm long, 7½ & 9¼mm Ø {12 total}. **Cord**, not seen {1}. **Driving Bands**, rubber, 4mm Ø {2,2,2}. **Screwdriver** {1}. **Spanner** {1}.

Two Other Boxes of plain greyish cardboard were with one of the Sets. They were unopened and measure 35½*13*3¼ & 31*13*3¼cm. They have no label but inside are the same Quality slips as with the other sets. They are packed with parts and it is supposed that they may have been add-on sets. Their contents are as follows. **The larger box:** Flanged Plate, 5*11h {1}. Perforated Plate, 5*9h, square corners {1}. Strips, 17, 9, 7, 6h, the 6h slotted as per Eitech {4,2,3,2}. Pulley with boss, 50mm Ø, & Rubber Ring {2}. Screw-ended Rod, 10cm {4}. Axle, 17cm {1}. Plus, in a paper envelope: Axle, 5cm {1}. Corner Bracket {2}. Hinge (or Rod/Strip Coupling) {2}. Collar, 14mm Ø, 12mm wide, as in Fig.3 {2}. Axle Stop, {10}. Nut & 9mm Bolt {20}. **The smaller box:** Flanged Plate, 5*5h {1}. Strip, 15h {2}. Face Plate {1}. Corner Bracket {2}. Sector Plate, 3*3h {2}. Winding Drum {1}. Screw-ended Rod, 14cm {1}. Crank Handle {1}. Plus, in a paper envelope: Pulley, Loose, 18mm Ø {2}. Axle Stop {8}. Wire Hook {2}. Cord {1 hank}. Plus, in another paper envelope: Bolts, 9, 25mm {32,4}. Nut {56}.

The Manual that was with the 'German' set has 26 pages, 20*24½cm, and its cover has just the name of the set & the maker on it. After a lengthy introduction and the Set Contents, the models start with basics such as locknutt-

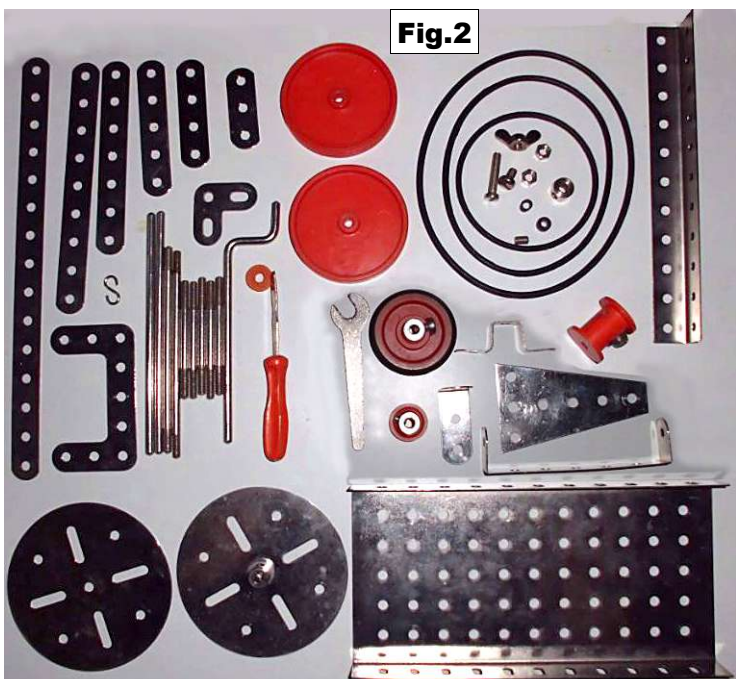


Fig.2

only exact date known is 1981 which appears on an Hungarian Quality Certificate slip which was with both Sets.

The Set has an orange plastic box (Fig.1), 31.5*23*4.5cm, with the name moulded into the lid in tiny letters. Inside are 3 layers of parts in white moulded plastic trays with recesses for each & every part. The Set weighs 4.60kg.

The Parts are shown in Figs.2 & 3 but

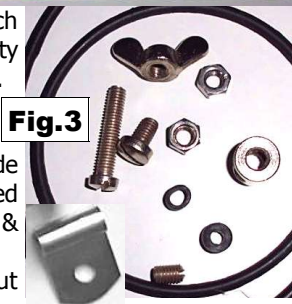


Fig.3

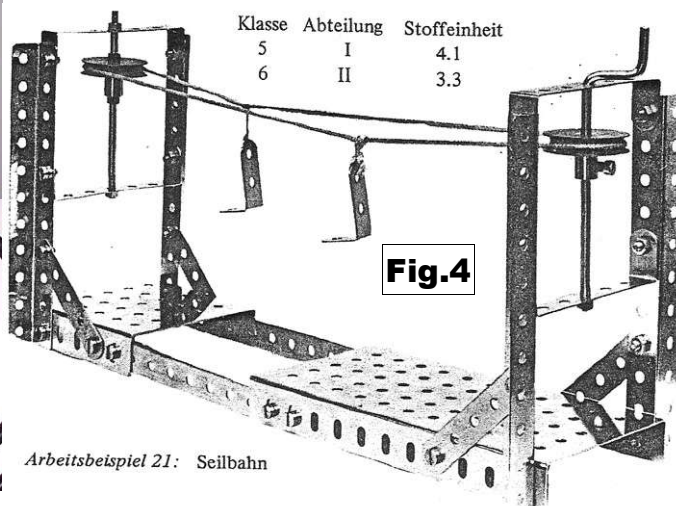


Fig.4

Arbeitsbeispiel 21: Seilbahn

ing and rigidity (of the triangle, and rectangles with & without bracing). Then simple models like a Step Ladder, a simple Girder Bridge, a hinged Gate, a Seesaw, & a Swing. Slightly more advanced models include a Luggage Barrow, a simple Cable Railway (Fig.4), a Scooter (Fig.5), a Hoist (Fig.6), & a swivelling Elevated Jib Crane. There is a halftone & list of parts for each model, and the appropriate Klasse is given for both types of disability. All the models are quite straightforward though the details in the photos of some of the more advanced ones don't look very clear – no doubt the originals were better. Mechanically there are cord drives, and loads on the

Crane etc are prevented from running away by sliding a Rod to prevent the winding handle from turning. Erik wrote that the manual follows Fröbel's principles which in my understanding might include a number of exercises of increasing complexity, models in 2 & then 3 dimensions for example, each of which would involve studying an object, creating it from the given materials, and developing it to exploit its potential. And it is all meant to be fun rather than a dreary school lesson.

The CLASS 1 'HUNGARIAN' OUTFIT

The manual with the Prague Hilfsschulen set was in Hungarian and actually belongs to this 'Class 1' set. The formal name of said set isn't known, it isn't on the manual cover shown

Fig.7 Elrendezési rajz

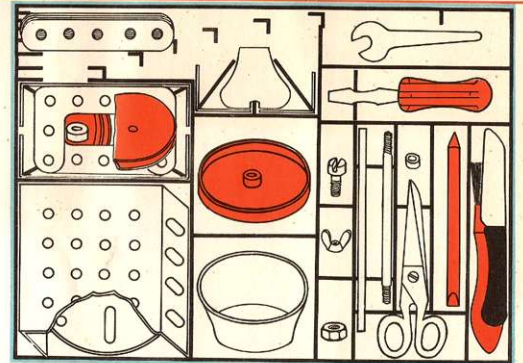


Fig.8

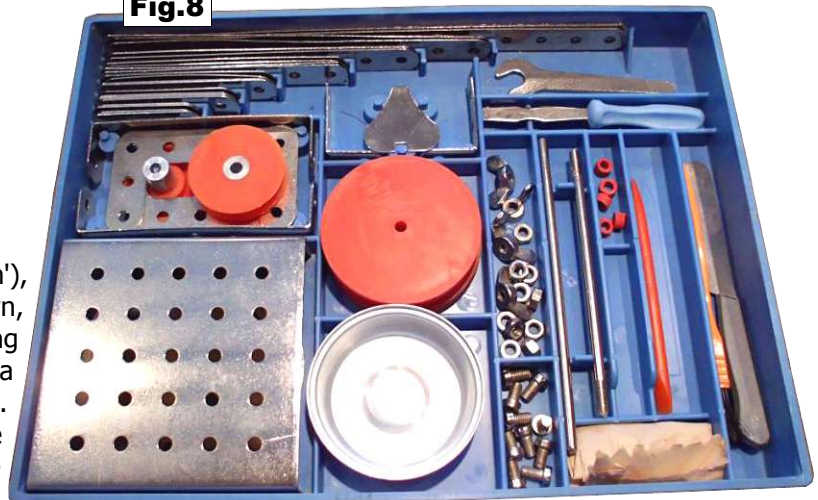
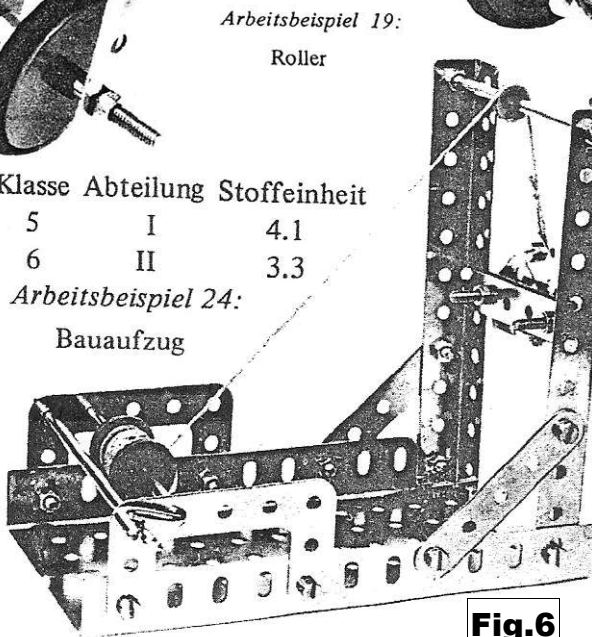


Fig.6



Arbeitsbeispiel 19:
Roller

Klasse Abteilung Stoffeinheit
5 I 4.1
6 II 3.3

Bauaufzug

in Fig.7 ('Elrendezési rajz' means 'Layout plan'), and the lids of the 2 (identical) sets known, which may well have carried it, were missing (instead the open box, right, was closed by a light card which fitted within the top edges). The box is the same size in plan as the Hilfsschulen box but only 38mm deep, the parts common to the Hilfsschulen set match them, and the contents are complete except for the Scissors. The manual has 10 pages and the model pages are headed simply 1-osztály (Class 1). The models are the simpler sort with a line drawing of each, often against a coloured background, and extra views plus a parts list for some but not all. The manual pages 1/8 & 1/9, right, show some of the more advanced models. There is no mention anywhere of disabilities and so it's likely that this set was intended for use in normal primary schools.

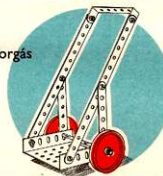
1. osztály

Targonca

1/8. sz. munkalap

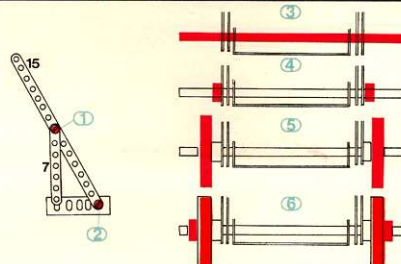
A kerék feladata a forgás

Fig.9



Alkatrészek:
2 db haveder (15)
2 db haveder (7)
1 db hajlított alaplamez
2 db kerék
4 db rögzítő gumigyűrű
1 db tengely (nagy)
1 db hajlított haveder (5)
6 db csavarosító
6 db csavaranya

[gy építsd a modellt!]



1. osztály

Mit építsünk?

1/9. sz. munkalap

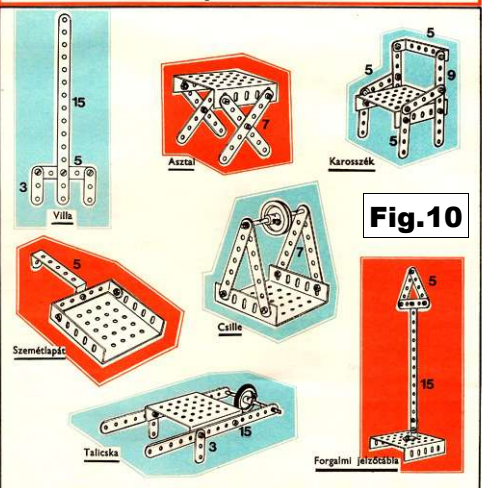


Fig.10

A UNIVERSAL Outfit UNIVERSAL was a Belgian system, most probably from soon after WW2, and is unusual in that almost all the parts have slotted rather than round holes. Some details are given in *MCS* but much more is now available courtesy Jean-Paul Meulemans who sent details of a set from Ebay.

The BOX measures 27*21*4½cm & its height suggests that it originally contained 2 layers of parts. The label right, about 15*11cm, is in the top left corner of the lid. It has 'R.C. Brux. 113971' in its bottom left corner and the wording stands for Régistre du Commerce Bruxelles, a register containing legally relevant facts about commercial firms. The number can indicate the starting date of the enterprise but this isn't currently known.

The PARTS Most are shown in Fig.2, but before describing them I'll list the Pièces Détachées [Separate Parts] taken from a leaflet in *MCS*, with my English names and comments.

• **Screwed Rods**, 5, 10, 15, 20cm.

• **Strips**, 2, 3, 4, 5, 6, 9, 12h.

• **Brackets**. Équerre followed by 'simple', 'double', 'en S'. Probably A/B, possibly D/B & Reversed A/B.

• **DAS**. Équerre followed by '3 trous', '5 trous', '7 trous', '9 trous'. It isn't clear if the lugs are included in the number of holes.

• **Square Plate**. • **Sector Plate**. • **Metal Wheel**.

• **Wooden Wheel**. • **Pulley, Large**. • **Pulley, Small**.

• **Hub Disc**, aluminium. • **Hub Disc**, coloured.

• **Packet** of Tyres & Wheels. • **Packet** of N&B.

The ACTUAL PARTS will now be listed with notes on them and quantities in curly brackets (though with the lack of balance between the numbers of Strips and the other parts, they may not reflect the contents of a set).

• **The metal parts**. The painted ones are steel, the rest are non-magnetic, probably zinc. But some loose unpainted parts to hand are a mix of zinc and steel. In both cases their colour ranges from light to dark grey, and all are quite soft metal and relatively easily bent.

• **The slots** are typically 7*4mm at 12.0mm pitch but all the dimensions vary a little, with for example the slots in some parts as large as 7½*4¼mm.

• **Screwed Rods**. 3 were found, all nominally 3.5mm Ø, but with two different



Fig.1

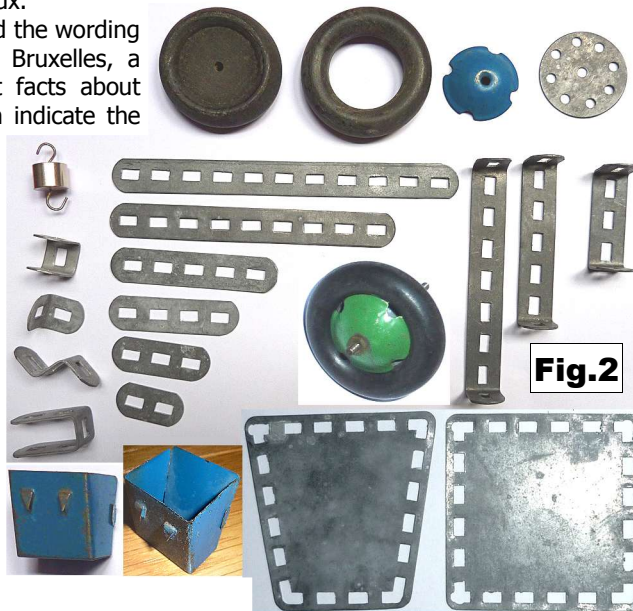


Fig.2

slide sideways off them. {4}

• **Hook**. Not in *MCS*. • **Dredger Bucket**. Again not in *MCS* but its two triangular hooks fit into adjacent slots and its blue matches the Wheel Hub Disc.

The MCS ENTRY includes two addresses. One is 34 rue d'Arenberg, Bruxelles on the lid label of a No.2 set. Said label is basically similar to Fig.1 but 'UNIVERSAL' is in a normal typeface. The second, UNIVERSAL, 55 Rue de Schaerbeek, Bruxelles, is on the leaflet as the address to send entries for a model building competition. The Leaflet also has a list of the range of sets: Nos.1-8, 10 & 11.

The MODELS shown in *MCS* are reproduced below (but only the top & a slice showing the first platform are shown of the 40cm or so high Eiffel Tower). Some parts not so far mentioned can be seen in them, though whether real or imagined I can't say.

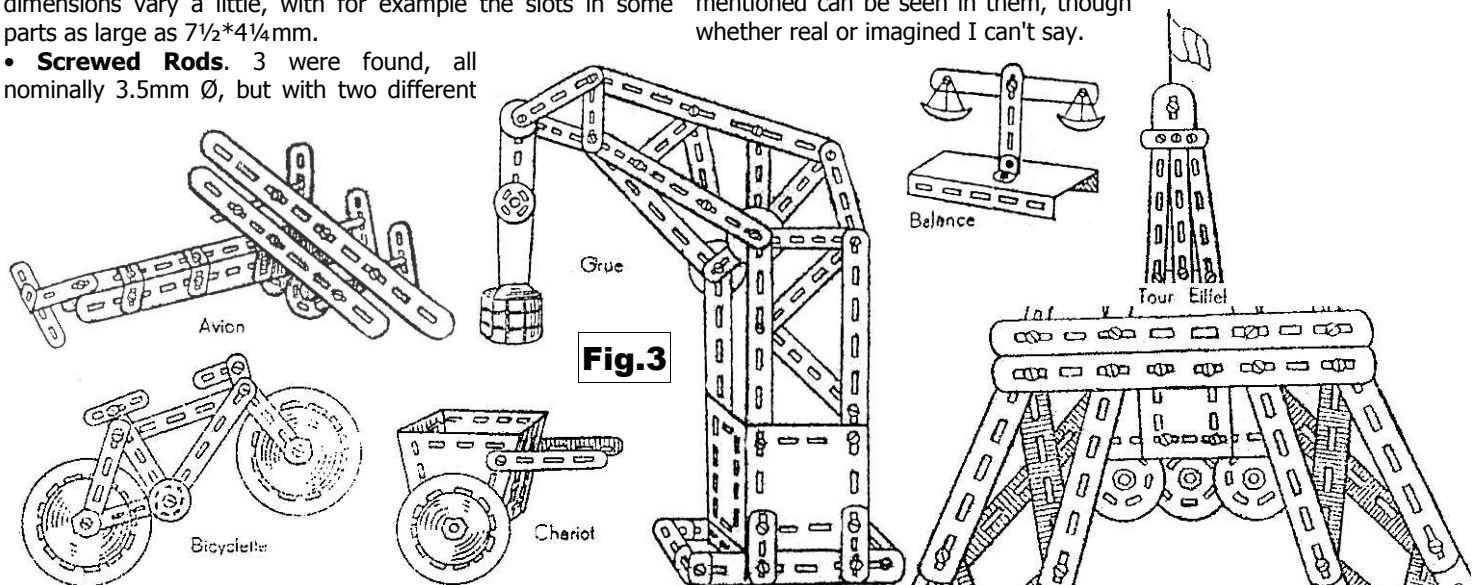


Fig.3

Snippet. 'New' System: DER EISENKONSTRUKTEUR

The set to be described is the more complete example of the two which have been seen on Ebay. DER EISENKONSTRUKTEUR seems to be a fairly basic DIY system with Strips & Girders held together with rivets. The text under DER EISENKONSTRUKTEUR [The Iron Builder] on the lid, right, speaks, when loosely translated, of 'Educational activity | for boys | using the technical drawings supplied | or building your own designs | with high-quality tools'.

Fig.A



The box was said to be 34*29*5cm. As can be seen in Fig.B the parts are lengths of blue and red sections, a Hammer & a pair of Pliers. The 6 different sections are shown (as Figs.1-6) along the top of Fig.C, a sheet pasted to the underside of the lid. They are, from left to right, a 6*6mm A/G, a 6*6mm 120° A/G, a 3½*3½mm A/G, a 6mm wide Strip, a 6*11mm Channel Girder, & a 2mm wide Strip.

Continuing down Fig.C, Fig.7 shows a structure with holes formed on the intersection of the centrelines of the Strips & A/Gs. The purpose of the tabs in Fig.8 is no doubt explained in the text, and likewise how the mitre in Fig.9 is to be made. The rivets are to be bent up from short lengths of the 2mm Strip. I think Fig.10 shows such a length but I'm not sure of the significance of the little crossbar at the top. Fig.11 shows the Strip formed into a teardrop shape, presumably around a rod of some sort. Fig.12 shows the teardrop squeezed using the Pliers to leave a circular top which is then to be hammered to form the top of the rivet (Figs.13 & 14). Finally Figs.15 & 16 show the rivet's split shank being bent over to join 2 Strips on, it says, a solid surface. I expect the Hammer would need to come into play again to obtain a firm joint.

Fig.B



The parts would need to be cut to length and holes made in them. One of the Ebay ads mentioned these operations but there are no apparent clues as how they are to be achieved. Given the depth of the box it was probably a question of Snips for the cutting, plus Punching Pliers or perhaps a simple, easily assembled Punching Tool. The holes would need to be about 2¼-2½mm Ø to take the rivets.

There is no obvious use for the wooden dowel in the box, and it could be a pencil, but there were longer lengths of similar looking dowelling, but without any end taper, in the other Ebay outfit.

One Ebay photo showed 6 single-sided sheets, one similar to the one in the lid, and the other 5 model plans. The Tower on the lid and a Bridge are shown in Fig.D, and the beginning of a parts list can be seen for each. Only a little is visible of the other 3 sheets but one is another Bridge, but it is not the one on the lid.

There is no indication of the age of the Set but I wouldn't be surprised if it was pre-WW2. I wonder how successful it was. The simple Bridge in Fig.D would need some 50

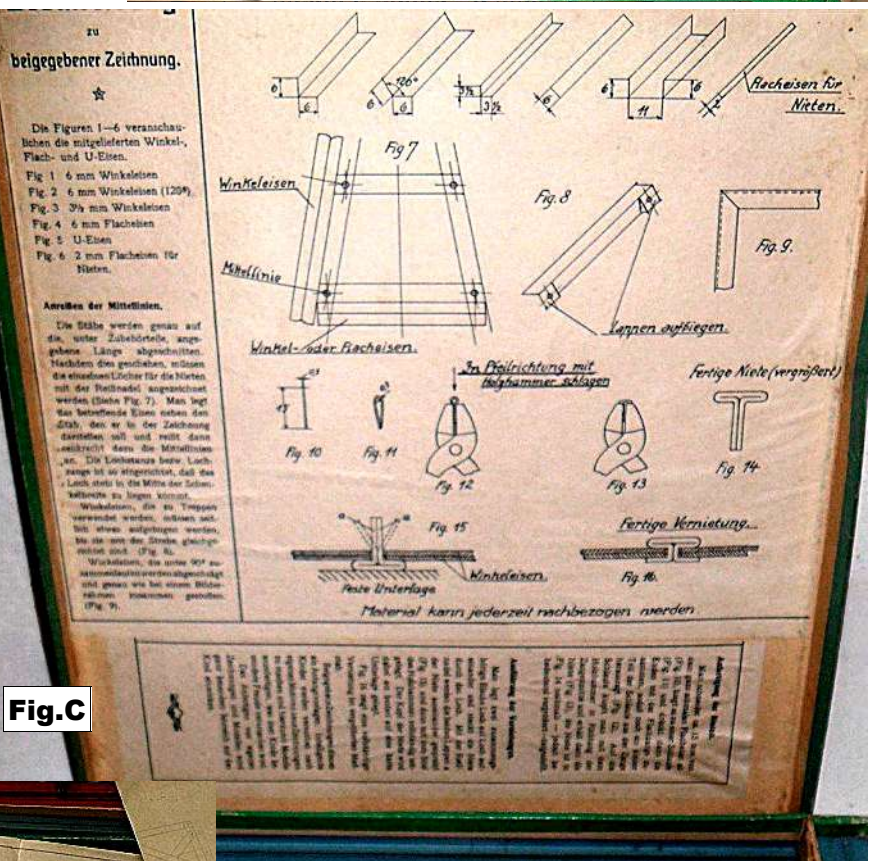


Fig.C

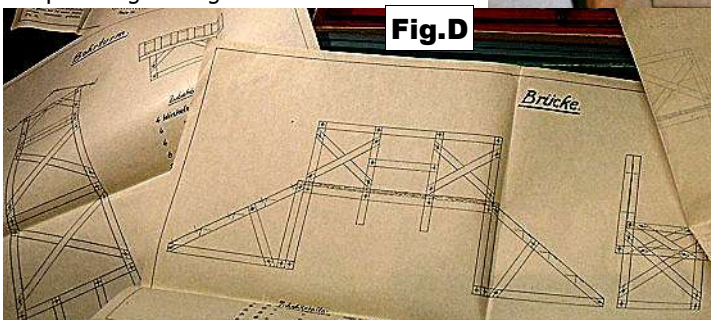


Fig.D

rivets, and the Tower well over 100 – but then boys had lots of patience in those days, or so no doubt the makers of DER EISENKONSTRUKTEUR persuaded themselves. The blue Girders under the handles of the Pliers in Fig.B look to be joined by small screws rather than rivets.

My thanks to Thomas Morzinck for his help in translating some of the German for me.

A JOLEI Manual A few details of this small German system were given in 15/415, & a description of Set Nr.0 in 42/1274. Now Jürgen Kahlfeldt has kindly sent, via Thomas Morzinck, scans of a Nr.1 manual. It is in German with 32 landscape pages, 145*102mm, including covers, printed on poor quality paper. The front is as in OSN 42 though in more muted colours. The inside pages are beige. p2 (C2) has only words that claim registration & forbid reproduction, plus a long PR which includes: 127. 5000/5.48.K1.A. p3 has an Intro signed by Josef Leier, and his initial letters explain how 'Jolei' came about. p4 has words of advice to get building underway.

pp5-30 have 51 models with a shaded line drawing for each (except the Bridge on the cover), additional scrap views as necessary, & a parts list. A few have a name on them, as in Fig.5, presumably of whoever submitted them. Going through the manual the models are classified into 7 Groups: 1. At School; 2. The Temporary Home; 3. By the Railway; 4. In the Street; 5 At the Fairground; 6. Die Arbeit [Industry?]; & 8. Shipping.

Gruppe 1 has 3 models on p5 from Lehrerpult [Teacher's Desk] to Schultafel [Blackboard]. **Gruppe 2.** Its 18 models are on pp6-12 from Behelfsheim [Temporary Home] (Fig.4) to Sägebock mit Säge [Sawhorse with Saw]. The other models are mostly domestic items. **Gruppe 3** has 18 models on pp13-18 from Bahnhof (the Station in OSN 42) to Eisenbahn-Schranke (Fig.5). Many are various Signals, on a Footbridge in one case, but there are also 2 Railway Bridges, the one on the cover (no drawing of it is provided, only a parts list), some 35cm long, & a simpler one about 50cm long (Fig.6). **Gruppe 4** has 7 models on pp19-21, from Warnkreuz to Warnschild – both are Warning Signs and the other models are street furniture except the Bridge in Fig.3. **Gruppe 5.** Its 6 models are on pp22-24, from Marktstand [Booth] to Schiffschaukel [Swing Boat]. The other models are various Swings except the Carousel in Fig.1. **Gruppe 6** has 5 models on pp25-29, from Flugzeug [Aircraft] to Funkturm [Radio Tower] – the latter's Group name is Bei der Post [At the Post] so perhaps it was meant to be in the 'missing' Gruppe 7. The other models are the Crane & Digger in OSN 42, & the Lift in Fig.2. **Gruppe 8** has just one model, Dampfer [Steamship] on p30 (Fig.7).

p31 (C3) invites builders to send in details of their original models made from the Set, & says that they will be considered for inclusion in the new manual. p32 (C4) has only Jolei Hamburg, & Jolei-Entwurf [Jolei-Design], on it.

The contents of Set 1 can perhaps be judged from the parts used in the models, as follows. 2,6,8,6,6,6 of 3,4,5,7,9,11h Strips. 6,4 of DAS 1*3,5*1h. 6 A/B. 1 Flanged Plate 5*11h. 35 N&B. The Card needed for many of the models is included in the Parts Lists and also some other items such as the crank handle used in the Crane. It's likely though that these were all to be provided by the builder – wire is mentioned for the crank handle. The Crane also has a wire hook but it isn't listed.

So, no Wheels or circular parts of any description, and given that, & the size of the Set, the models seem to be a fair selection, & likely to interest a youngster. Nonetheless some, like the Ship, could clearly be improved within the Set's parts, and it's not clear how some, the Lift for instance, are meant to operate. Given that a crank handle is used in the Crane it seems strange that it isn't more widely employed.

»Auf dem Rummelplatz« Gruppe 5

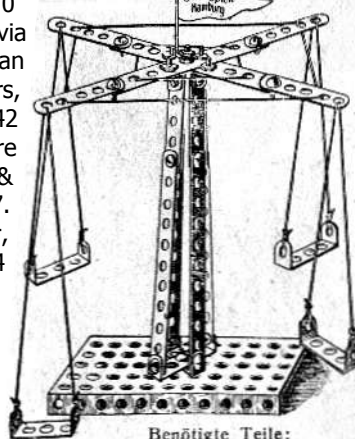


Fig.1

Benötigte Teile:

Hauptplatte	11 Loch	1 x
Flachstück	9 Loch	4 x
Flachstück	5 Loch	2 x
Bügel	3 Loch	8 x
Winkel		6 x
Schrauben		4 x
Muttern		22 x
etwas Bindfaden		23 x

Ketten-Karussell

Gruppe 6

»Die Arbeit« Lastenaufzug

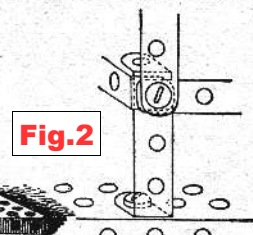


Fig.2

Benötigte Teile:

Hauptplatte	11 Loch	1 x	Flachstück	4 Loch	5 x
Flachstück	6 Loch	6 x	Bügel	5 Loch	4 x
Flachstück	9 Loch	6 x	Bügel	3 Loch	6 x
Flachstück	7 Loch	5 x	Schrauben		34 x
Flachstück	5 Loch	8 x	Muttern		34 x

Gruppe 4 »Auf der Straße«

Zugbrücke

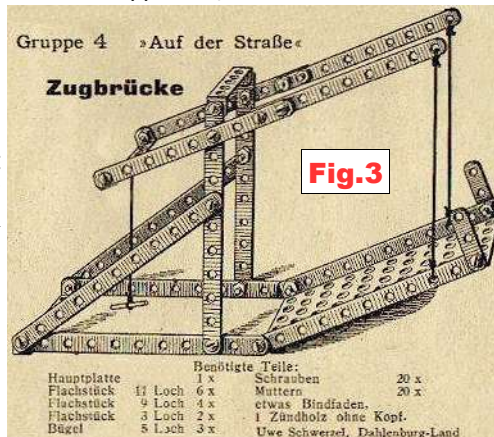


Fig.3

Benötigte Teile:

Hauptplatte	11 Loch	1 x	Schrauben	20 x
Flachstück	4 Loch	6 x	Muttern	20 x
Flachstück	4 Loch	4 x	etwas Bindfaden	
Flachstück	3 Loch	2 x	1 Zündholz ohne Kopf	
Bügel	5 Loch	3 x	Uwe Scherzels, Dahlenburg-Land	

Gruppe 2 »Im Behelfsheim« Behelfsheim

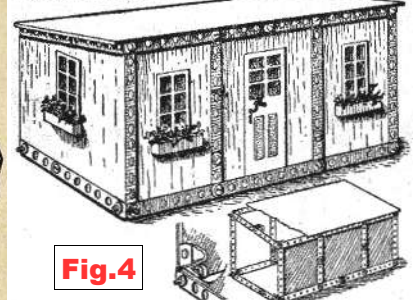


Fig.4

Benötigte Teile:

Flachstück	11 Loch	6 x	Bügel	5 Loch	4 x
Flachstück	9 Loch	6 x	Winkel		4 x
Flachstück	7 Loch	6 x	Schrauben		30 x
Flachstück	5 Loch	4 x	Muttern		30 x
Flachstück	4 Loch	2 x	Wände und Dach Pappe		
Flachstück	3 Loch	2 x			

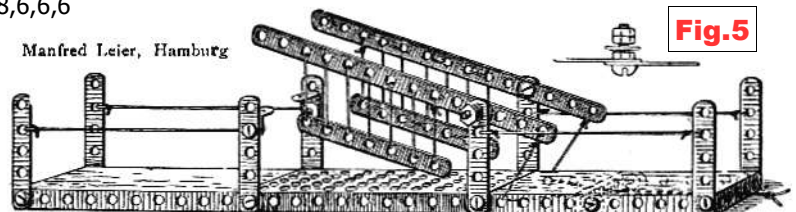


Fig.5

Gruppe 3 Eisenbahn-Schranke »Bei der Eisenbahn«

Benötigte Teile:

Hauptplatte	11 Loch	1 x	Flachstück	5 Loch	8 x	Schrauben	14 x
Flachstück	11 Loch	6 x	Flachstück	4 Loch	2 x	Muttern	18 x
Flachstück	7 Loch	2 x	Bügel	5 Loch	3 x	etwas Pappe und Bindfaden	
			Winkel		2 x		

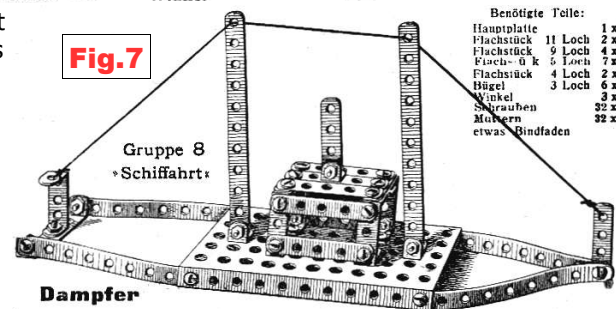


Fig.7

Benötigte Teile:

Hauptplatte	11 Loch	1 x
Flachstück	9 Loch	2 x
Flachstück	5 Loch	4 x
Flachstück	4 Loch	2 x
Bügel	3 Loch	6 x
Winkel		3 x
Schrauben		32 x
Muttern		32 x
etwas Bindfaden		

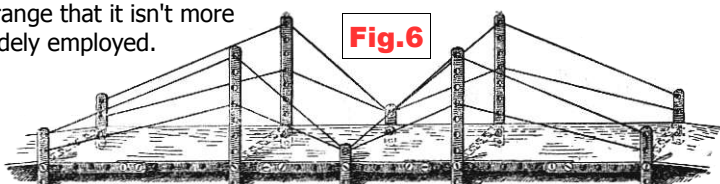


Fig.6

Gruppe 3 »Bei der Eisenbahn«

Hängebrücke

Benötigte Teile:

Flachstück	11 Loch	6 x	Bügel	5 Loch	4 x
Flachstück	9 Loch	4 x	Schrauben		26 x
Flachstück	7 Loch	4 x	Muttern		26 x
Flachstück	4 Loch	4 x	Fahrbahn aus Pappe		
Flachstück	3 Loch	2 x	Aufhängung aus Bindfaden		