

Editor **Tony Knowles**
 7 Potters Way
 Laverstock
 Salisbury
 SP1 1PY
 England

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Email: tony@osnl.co.uk

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EDITORIAL As noted previously PDF files load relatively quickly and are often more convenient to print out. So when I update the Database & Index on the OSN website I shall use this format.

It would also be possible to send the original files to anyone by email and this would allow the recipient to print out with whatever layout was desired, and also to sort and filter the data as required. Let me know if you would like one or both of the files and in which format – OpenOffice .sxc or Microsoft .xls.

Shorter NOTES, with thanks to all contributors.

1. Snippet. The DITMAR Motor The account of this Austrian system in 36/1079 included a rather poor photo of a motor, and it wasn't certain that it was actually a Ditmar product. Right, a rather clearer image of one definitely sold as Ditmar, and as can be seen the name is on the yellow capacitor. The Ebay offer gave no other details and unfortunately the front end wasn't shown. To give an idea of the Motor's size it will be recalled that the hole pitch is 8.5mm.



DITMAR S4 [42/1260]

2. Snippet. ARCHITECTOR Clips This French system (see 39/1194) has card Panels held to metal Brackets by Clips. Below a packet of said Clips labelled 'No.15 Attaches' and the

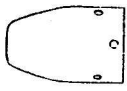
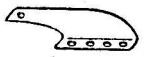


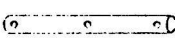

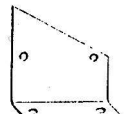

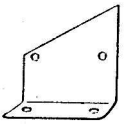

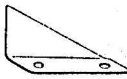

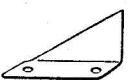



name along the bottom is Fernand Nathan, a Parisian publishing house.

ARCHITECTOR S2 [42/1260]

3. The DAN DARE Rocket Set This outfit, with its smaller, 1½" Ø, nickelled body parts, is the least well known of the DD sets (see 14/366), and below photos of it from Gary Higgins.



- NOSE No. 01  FIN No. 6 
- CURVED PLATE No. 03  FIN No. 7 
- TUBE No. 4  FLAT LINK 
- FIN No. 08  CURVED LINK 
- FIN No. 09  BOLT C 
- FIN No. 10  BOLT A 
- FIN No. 11  NUT 

Above are the parts as in MCS (taken from the manual) and the main ones are individually strung or clipped to the backing card. All the Fins are red and the small triangular pair, #10 & 11, are either side of the 4 black Tubes.

DAN DARE S2 [42/1260]

4. **Snippet. CUB BUILDERS** This small American system with aluminium parts, including several Flanged & Channel Plates, was described in 28/838 and it was thought to date from soon after WW2. This has been largely confirmed by a CUB Model Sheet which was found in a file marked with the year '1946'.

CUB BUILDERS S3

[42/1261]

5. **Snippet. More on METALL-BAUKASTEN [5]** A little on this small German system was given in 36/1070 and now Jan Ringnalda has send the much better photos below from an Ebay item. The box was said to measure 200*100*27mm but from the photos the 100:200 ratio is incorrect. Some of the parts in the box are obviously from a 'Matchbox' set and scaling from them gives the 200mm dimension but the other is about 150mm. Then scaling the Strips & Flanged Plates gives



their hole pitch as about 13mm, so possibly that figure or 1/2". Looking at the OSN 36 parts again there are a few Strips among them that match the colour of the present ones (not the rusty ones mooted as possibles before). So are the non-Matchbox parts in this set genuine? Quite likely I suppose, though the Plates on top of the towers in the Bridge on the lid are shown as having 5*4h.

METALL-BAUKASTEN [5] S2

[42/1261]

6. **Snippets. ANKER** The cardboard lid from a Richter ANKER set was shown in 38/1134 and the Ebay photo below is



of an outfit in a wooden box. The top of its lid wasn't shown but the manual cover resting against its underside is of a similar design to the OSN 38 lid label.

As can be seen the different types of part include various lengths of Strip, the longest probably 25h; some Brackets; 5*11h & 3*5h Plates (the former not fully perforated); a 5h Ø Disc; a 1 1/2h Ø Pulley, probably aluminium; Rods, most likely fully or partially threaded; and a Crank Handle which probably has a threaded end. The 3*5h Plate and the Pulley can be seen among the parts (a mix from several systems) that were with the OSN 38 lid.

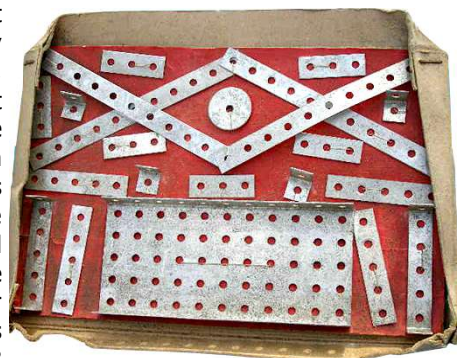
A second set is in a cardboard box with a lid label identical to the OSN 38 one. Most of the parts mentioned above can be seen including the 5*11h Plate, and it has only the edge & centre line holes. Also in the box are 2 Winding Drums which may not be original because they look exactly like those in the METALL-BAUKASTEN set described in 28/820 & 34/1035. The size of the box was given as 32.5*16*3cm and scaling from that gives a hole pitch of 12.5mm, so certainly near 1/2".

ANKER [2]: S2

[42/1261]

7. Snippet. A METAL CONSTRUCTION and BUILDING OUTFIT

The Ebay set right has a box 11*7", very slightly larger than the one in 35/1037, but with the same label except that it has a narrow outside orange border. Compared with the earlier outfit this one has no 5*5h Plate and neither the Span'driver, nor the small Pulley? Wheel (between the Discs), can be seen. Another very noticeable difference is that all the Strips and the A/B have square corners. The quantities of the Disc & Strips cannot be compared because the Discs in this set, and the Strips in the OSN 35 outfit are probably stacked.



METAL CONSTRUCTION and BUILDING OUTFIT: S2

[42/1261]

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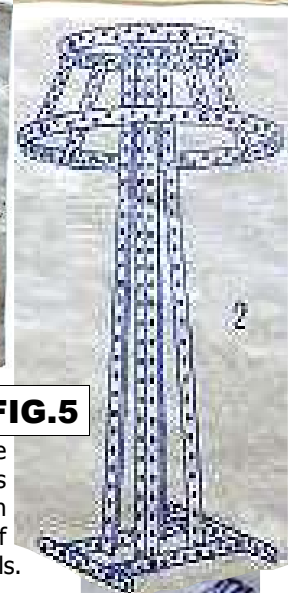
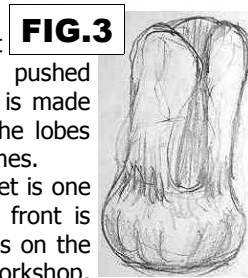
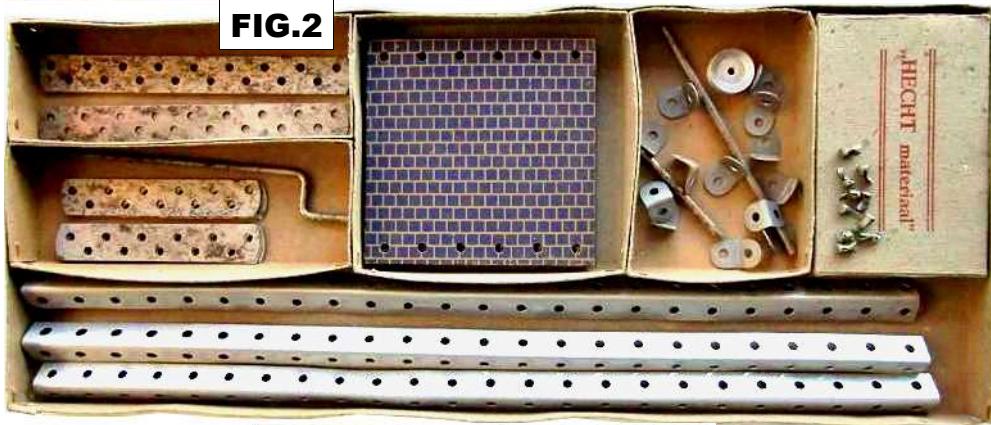
'New' Dutch System: FLEX

Jan Ringnalda kindly sent details of the set he received on Dec. 5th, 1946 (the date Santa comes in The Netherlands). FLEX is unusual in having no Nuts & Bolts. The box measures 40½*17*2½cm and the lid is shown right. The words under the quite elaborate Crane in the red panel (and in Fig.4) translate as 'For young builders | Fun and educational'.

The PARTS Some are steel, some aluminium, and the Plates are cardboard. Those of the original parts that remain can be seen in the open box right. Holes (all are round) are 3.9mm Ø at 16.0mm pitch. Steel parts are 15.9mm wide and .45mm thick; aluminium are 12.5mm wide and either .50 or .75mm thick.

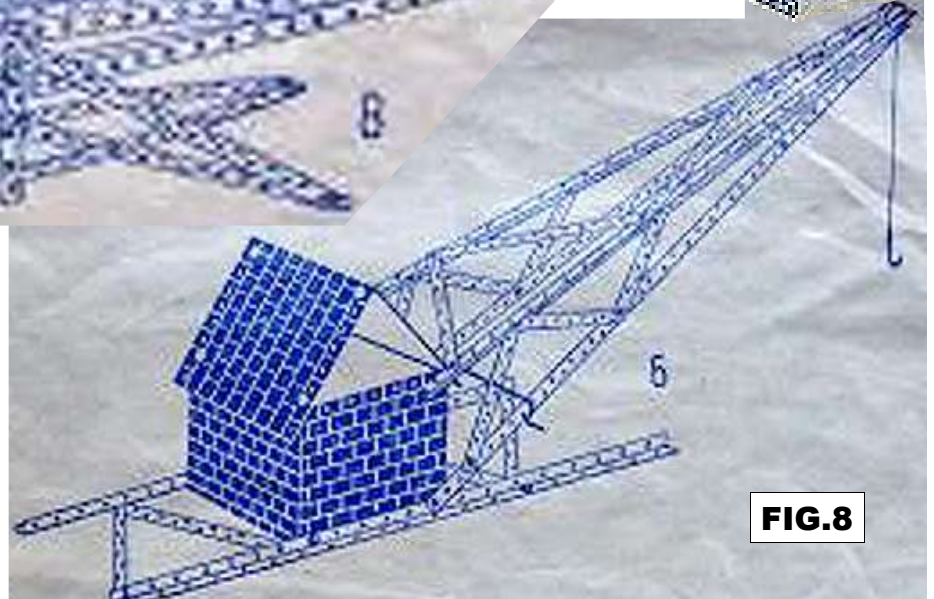
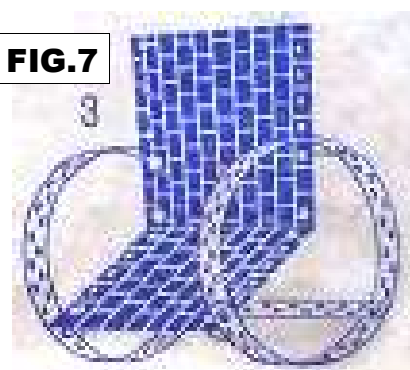
The various parts are as follows.
 • 6 & 9h Strips. • 24h A/G. • A/B.
 • Loose Pulley 18mm Ø. • 50 & 110mm Axles, 3.7mm Ø, and a Crank Handle with a shaft about 115mm long. • Cardboard Plate, 95*93mm, 1.2mm thick. • 'Rivet', see Fig.3. It is about 9mm long and its 3 lobes have to be bent outwards after having been pushed through the parts to be joined. It is made of soft steel and Jan wrote that the lobes break off after being used 3 or 4 times.

The MODELS The Model Leaflet is one sheet folded to 20*26cm and the front is shown in Fig.4. There are 8 models on the other pages, from 1 Werkplaats (Workshop, but actually an open-sided building with a floor & pitched roof made from the Plates), to 8 Vliegtuig (Aeroplane, below). The names of the models are listed on p3 together with a note suggesting that other models can be made, and that the Rivets can be ordered from your dealer. Apart from the models mentioned above and the Crane, Rocking Chair & Table Lamp shown here, the others are a



Girder Bridge, a Lightship, & a Light Tower.

Jan said the the Strips were flexible enough to form the circles needed in several of the models.



PRESS-FIX This was a 1950s UK system with a handful of more or less conventional parts, mostly metal, but held together by little white plastic Plugs pushed into little red plastic Sockets. These last two parts were actually described in 9/227: they were from an all-plastic set by the same maker, also called PRESS-FIX. This account is based on one set, incomplete but with examples of all the parts except the DAS.

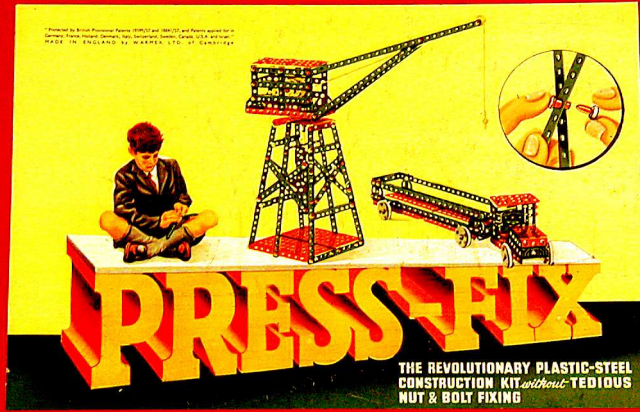
PRESS-FIX was made by Warmex Ltd, Swavesey – a village near Cambridge. It is thought that there was only one metal outfit, and that it came before the plastic version. The lid of the present outfit mentions two 1957 provisional patents, 57/19599 & 57/18841. The model leaflet belonging to the plastic set in OSN 9 was Copyright 1959 and an ad from Anglocentrop Ltd., 62 Oxford Street, London, W.1 (presumably a distributor) in the Jan. 1960 Games & Toys showed models made from the plastic parts.

The SET is in a red box, 43¾*31*2½cm, with the label, 138*211mm, in Fig.1. (A box, 40½*29¼*2½cm was mentioned in MCS.)

The PARTS in their pale blue moulded tray can be seen in Fig.2 (the left side matches the right) & Fig.3. Notes on them follow with, in curly brackets, the quantities of parts found in the present set, those found in the MCS set, and those needed for the manual models. Where a part is in more than one colour the quantity of each is given.

- **Holes** are 4.7mm except that the bores of the circular parts are a little smaller. The pitch of the holes in the Flanged Plate is 12.7mm but it is 12.8mm in the other parts. All the holes are round.
- **Quality** Apart from the hole pitch the parts are well made and well finished.
- **Flanged Plate**, 5*11h. {1 blue, 1 red; 1 blue, 1 red; 2}
- **Strips**, 5h {9 blue & 1 green; 12 blue & 6 green; 8}; 11h {4; 6; 6}; 19h {1; 6; 4}; 25h {3; 6; 4}. They are made of rather springy steel; their width is 12.7-12.8mm and the ends are almost fully radiused. The 19 & 25h are .9mm thick; the 5 & 11h .8mm.
- **DAS**, not seen – they were probably in the 3 empty oblong recesses in Fig.2. {0; 6 green; 6}
- **Trunnion**. {8; 9; 8} • **Flat Trunnion**. {8; 10; 8}

Fig.1



- **Axle**, 4" long, 4.68mm Ø. {3; 5; 5} The tray has recesses for only 4 Axles.
- **Pulley Disc**, 39mm Ø. The bore is 4.6mm and grips the Axle well. {4 red, 4 yellow, 1 gold; 5 red, 5 yellow; 10} In the present set 2 each of the red & yellow have their peripheral holes counterbored, as can be seen in Fig.3.
- **Small Pulley Disc or Axle Stop**, see Fig.3. 16½mm Ø with a 4.5mm bore – it is difficult to push onto an Axle. It is not used in any of the models, nor is it mentioned in MCS. {0; 4; 0}

Fig.2



- **Plug & Socket**. The Plug's shank is 3.25mm Ø (probably a nominal 1/8"); the Socket's 4.75mm (almost 3/16"), with a bore of 2.9mm. The parts are very hard to push together and pliers are often needed to pull them apart. Were they easier to use 50 years ago? Both shanks are 7½mm long, and both heads are 7.6mm Ø. {86; 79; 77}
- **Tool**, 52mm long, see Fig.3 (in Fig.2 it is in the blue Flanged Plate). The fork end is used under the Plug head to pull it out of the Socket. If the Socket's head is then inaccessible the spike can be used to push it out of a hole. {1 green; 1 black; 1}
- **Cord**, a Hank of is mentioned in MCS.

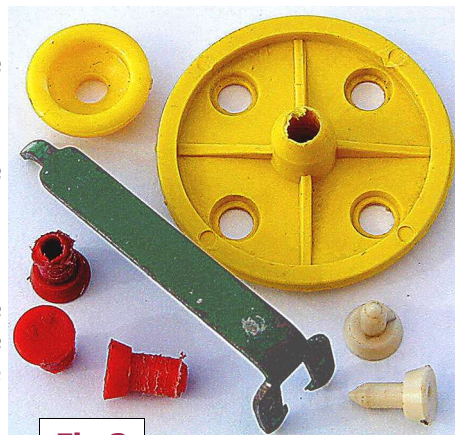
The MANUAL has its covers and possibly other outer pages missing with 12 unnumbered pages remaining. MCS talks of 16 pages and a cover similar to the lid label, but it isn't clear if the 16 pages included the covers.

p1 of the 12 pages starts rather strangely with talk of youngsters who 'are not bored with the time-consuming nut and bolt assemblies' and also of Press-fix as 'ideal in occupational therapy for patients of all ages'. The use of the Plug & Socket, and the Tool are then described.

22 models are shown on the next 11 pages, 2 to a page, from HANDCART to OPEN TRUCK. They provide a good selection including Fairground Models, Cranes, Machine Tools, and an Excavator, but none of course approach the two models on the lid in terms of size. A small halftone is shown for each model, plus a list of parts, and fairly lengthy instructions. The photos are adequate only for the smaller models, and the instructions are unclear in some cases. Three of the models are shown in Fig.4 on the next page, at their original size (but rearranged), and the photos show as much detail as could be seen in the Manual.

My Model is shown in Fig.5, basically the Power Press in Fig.4 but with the bracing changed because I had only 4 of the 11h Strips, & no DAS. (The 3 DAS used at the top are substitute parts, from PREMIER.)

Fig.3



The changes made to the bearings for the vertical spindle were because I couldn't understand how the original was constructed.

Two parts joined by a Plug & Socket were held closely together if the Plug was pressed fully home but even so the parts could turn relative to one another under a quite small load. Thus bracing was important and in this model all was well with one exception – the inner bearing for the top horizontal shaft was held only by the holes in the lugs of a DAS. There was no obvious way of improving matters short of a complete redesign. This didn't stop the model working but care was needed not to knock the bearing out of alignment. One other unsatisfactory feature was that the only way of joining two parts so that they would turn freely relative to one another was to not push the Plug fully home and thus allow both parts to ride on the Plug itself. This worked but was untidy with play of nearly 1½mm. Another 'untidiness' was that the Wheels were made of a non-rigid plastic and it was difficult to get the face to run true – this was a problem with the red 'big end' Wheel on the top shaft.

Assembling the model would probably have been a little quicker than using N&B if the Plugs had not been so difficult to get into and out of the Sockets. The Axle Stops on the top horizontal shaft were not in the Manual version but proved invaluable in aligning the connecting rod correctly.

With the mix of colours the appearance of the model was not to my taste and the red & white of the rather intrusive Plugs & Sockets would have looked more at home on a Christmas tree.

Another Plastic PRESS-FIX SET Apart from Axles all the parts in the OSN 9 set were plastic but a larger plastic set seen on Ebay looks to have steel DAS.

PRESS-FIX

CRANE

Parts required

- 1 Base Plate
- 4 5½ in. Perforated Strips
- 5 2½ in. Perforated Strips
- 2 2½ in. Bent Perforated Strips
- 2 Bent Triangular Pieces
- 6 Wheels
- 2 Spindles
- 28 Plastic plugs and sockets
- 4 Flat Triangular Pieces

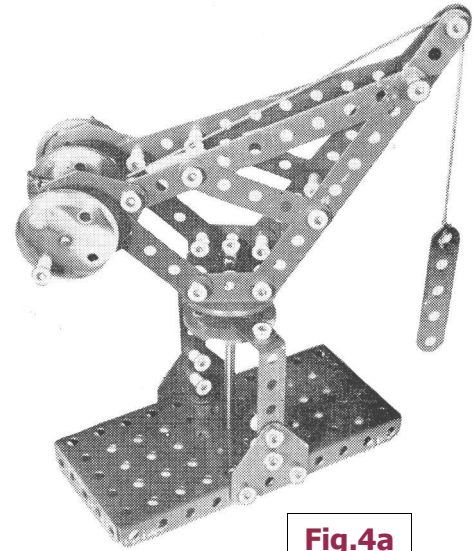


Fig.4a

CONSTRUCTION

The Crane is fixed to the top of the vertical Spindle by means of two Bent Triangular Pieces. These are fixed to the top Wheel. Another Wheel is placed under the 2½ in. Strip which is fixed to two 2½ in. Bent Strips which in turn are fixed to the side of the Base Plate by two Flat Triangular Pieces. Another Wheel is placed on the vertical Spindle under the Base Plate. The up and down movement of the string is made by the same means as on the model of the Hoist.

ELECTRIC TRUCK

Parts required

- | | | |
|-----------------|--------------------------|----------------------|
| 2 Base Plates | 6 2½ in. Bent Strips | 3 Spindles |
| 6 5½ in. Strips | 8 Flat Triangular Pieces | 7 Weells |
| 8 2½ in. Strips | 2 Bent Triangular Pieces | 57 Plugs and Sockets |

CONSTRUCTION

The two Base Plates are joined together with two 2½ in. Strips and two Flat Triangular Pieces. Two 5½ in. Strips are used to fill the gap in between the two Base Plates. The front Platform is fixed onto the Base Plate with two 5½ in. Strips. Four 2½ in. Bent Strips are fixed across these two strips. Two Flat Triangular Pieces form the front with two 2½ in. Strips fixed onto the top of them. The front wheel assembly is made by fixing two Bent Triangular Pieces onto a wheel; on these fix a Flat Triangular Piece, join these two together with a 2½ in. Bent Strip; the wheels are fixed onto the Bottom Holes; another wheel is used to space this Assembly from the Platform, the Vertical Spindle is then passed through the Platform through a Bent 2½ in. Strip with a wheel on top, onto which is fixed a 2½ in. Strip which is used for a Handle.



Fig.5

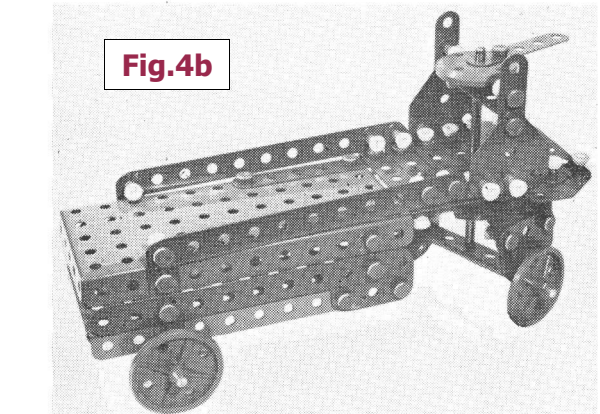
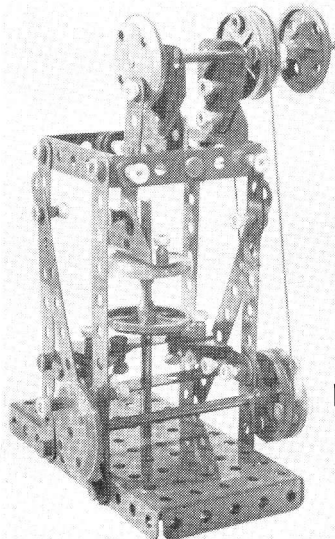


Fig.4b

POWER PRESS

Parts required

- | | | |
|-----------------|--------------------------|----------------------|
| 1 Base Plate | 4 2½ in. Bent Strips | 9 Wheels |
| 6 5½ in. Strips | 3 Bent Triangular Pieces | 3 Spindles |
| 6 2½ in. Strips | 4 Flat Triangular Pieces | 51 Plugs and Sockets |

CONSTRUCTION

Four 5½ in. Strips form the Main Uprights, another two are added to strengthen the Frame. The four 5½ in. Strips are joined together at the top with two 2½ in. Strips, and two 2½ in. Bent Strips, a further 2½ in. Bent Strip is fixed in the centre to which Flat Triangular Pieces are fixed. Another two are fixed on the end 2½ in. Bent Strip. These form the Bearings for the top Spindle. A double Bearing for the Vertical Spindle is made by fixing a 2½ in. Strip on top of a 2½ in. Bent Strip. The Bearings are fixed to the Main Uprights with two 2½ in. Strips fixed onto two Bent Triangular Pieces. The two Spindles are connected together with a 2½ in. Strip pivoted on a Bent Triangular Piece, which is fixed onto the Wheel on the Vertical Spindle. The Machine is driven with a Handle at the bottom with a piece of cord looped round the two Pulleys to act as a Drive.

Fig.4c

Snippet. 'New' System: FIFA The Ebay set was a Nr.1 and was said to be East German. Fig.1 shows most of the open box, Fig.2 the manual cover, and Fig.3 the inside of the lid, with details of the 17 different parts in the set and their quantities. The parts can just about be recognised from the drawings and most can be seen in the box, but the quantities are indecipherable.

The parts look to be made of aluminium, and to have a hole pitch of nearer 10mm than 1/2", though no dimensions were given. From top to bottom in the lid they are: 3,5,9,13,17h Strips; A/B & D/B; 2 DAS; 3 Screwed Rods; 2 Discs; a Span-driver; a roundheaded Bolt; and a hexagonal Nut. The DAS are made from the 9 & 13h Strips with the lug bend point across the second hole in from the end, leaving 5 & 9 clear holes in the bases. In the box two of the longer ones are joined by their lugs in the top compartment to the left of the 13h Strip. The D/B is probably made from the 5h Strip in a similar way to the DAS.

Were there other parts and sets? No Plates or larger circular parts can be seen in the models on the manual cover, but there is a blue electric motor in the ?Lathe on the table in front of the man.



FIG.1

FIG.2



FIG.3



OSN 42/1265

FIFA: S1

Snippets. KITSPOCK

Two sets which may be of interest have been seen on Ebay since the last mention of this 1980s Brazilian system in 29/876.

The first is the small set in Figs.1 & 2. From its packaging – the lid & the foam block housing the



FIG.1

view – the Screwdriver with a red handle and the Plates fully perforated. With these parts were some red Flexible Plates, 3h wide & up to 25h long, with all their holes elongated – they are not known KITSPOCK parts and could be BRAL. Other foreigners are the 2 grey Pulleys with Rubber Rings in the Set's top recess.

'35' can be seen on the bottom side of the box and might be the number of manual models; but if so it is one more than the 34 in the OSN manual (the 12 'BRAL' models in 26/762 was wrong, it should have been 16).

The lid of the second set (Figs.3 & 4) is completely 'new'. And as all the 5 sets covered in OSN 26 have only four Road Wheels, it isn't one of those. Perhaps the model Armoured Car on the lid denotes an Army theme set, but if so the colour of the parts is surprising. In Fig.4 the inset top right (on the lid) looks to be a booklet of some sort.



FIG.3

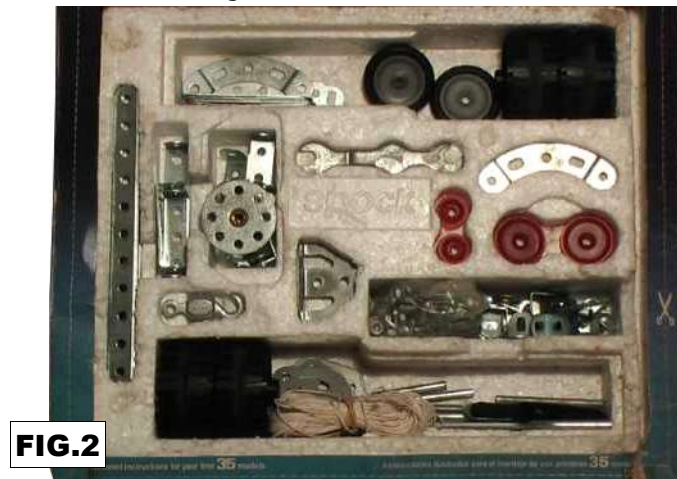


FIG.2

parts – it looks earlier than any of the sets previously mentioned. Also the bright parts are possibly nickelled rather than BZP. The models on the lid are among those for Set 1 in the manual described in 26/762 and from the inventory in that manual (see MCS Sheet X2.4) most of the main parts in the No.1 can be seen in the Fig.2. The large black parts in the top & bottom recesses are push-on plastic Road Wheels. The main parts missing are 3*5 & 3*11h Flexible Plates, and a Screwdriver, but these can be seen outside the box in another



FIG.4

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KITSPOCK: S2

Snippet. 'New' System: S S S Elsewhere in this Issue are details of two 'new' Dutch systems from Jan Ringnalda, and also thanks to him, the photos here of a third, taken from a Dutch Ebay-style website called Marktplaats. It was said to be made in The Netherlands and to date from the 1950s.



FIG.1

The box is blue and the label above covers slightly more than half the lid in width & depth. It shows that 'S S S' are the initials of Sterk – Stabiel – Solide, meaning: Strong – Stable – Solid, and that it is a Set No.2 (DOOS 2 along the bottom). The manual cover (Fig.3) indicates that there were also Sets 1 & 3.

Fig.2 is the centre & left end of the open box; the right end matches the left. The parts look to be aluminium and this bears out the 'Rust free' wording on the top left corner of the lid (the right corner has 'toxic free'). With some exceptions the parts look like TRIX, though there is no indication of their size, and the contents don't match any combination of TRIX Units.

The Non-TRIX parts are the Pulley with a tapped boss, the 15h long Flanged Plate, the 12h Wheel Disc, the Spanner, and the double-sided Hook (between the A/Bs). Also the Axle & Crank Handle which may be smooth between screwed ends but the photo is not good enough to be sure.

Footnote. The unusual Hook reminded of one among my 'Misc Hooks', and it proved to look identical to the S S S part in the box. Its holes match the TRIX hole pitch (7.8mm) but are slightly smaller, 3.4mm Ø against 3.6. It may

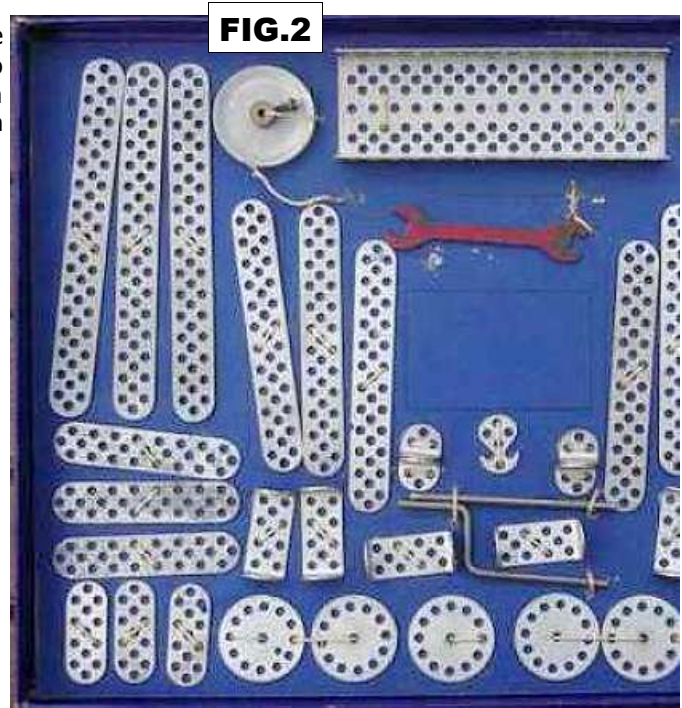


FIG.2



FIG.3

not be genuine of course but I don't recall another TRIX-like system with a similar Hook.

S S S: S1

OSN 42/1266

Some Unusual 'POLYLONG' Parts

'POLYLONG' in inverted commas is the name now used for all the current small sets which have parts that look like POLYLONG but which seem not to have originated from the Polylong company. Most of the parts in both systems look very similar to CONSTRUCTION but some of the 'POLYLONG' sets can hold a few surprises.

First, the German Happy People set



FIG.1

below left, #37811, has normal looking parts but they have a hole pitch of 11mm. As far as is known the pitch of the parts in the other H P sets is the normal 10.0mm. It is also possible that the JOE-MO set shown in Fig.8 of 41/1256 has 11mm parts.

The second anomaly is that most of the holes in one RCEE outfit (#392 20 in <http://www.rcee.de/> but 392 30 has also been reported) are square. Fig.9 of OSN 41 has a photo of the lid of this set (it was called METALLBAUKASTEN/METAL SET there). RCEE can be seen in the lid's top right corner and is a German store which sells a range of small sets. It is believed that only the 392 20/30 has square-hole parts but apparently there is no guarantee that future examples of the set will have these parts, or that they will not appear in other RCEE sets. Right, some typical square-hole parts from a 392 20/30 set, and it can be seen that

while most holes are square (4.2*4.2mm) the end slots in the Plate have rounded ends. Also the A/Bs in at least some examples of this set have round holes.

My thanks to Jürgen Kahlfeldt (via Thomas Morzinck) and to Jan Ringnalda for the above.

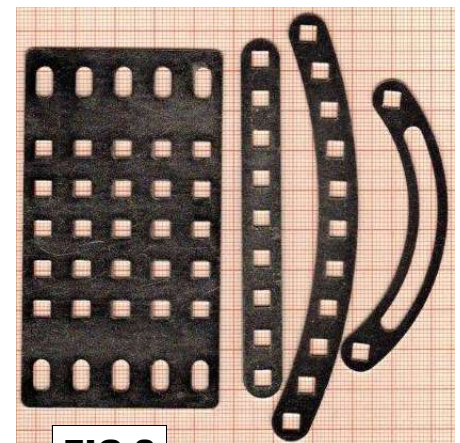


FIG.2

POLYLONG: S15

OSN 42/1266

An Early CONSTRUCTOR Set

Some notes on the early version of this French system appeared in 24/700. It was based on lozenge & half-lozenge shaped structural parts, and was introduced in the middle of WW1. Only one size of set has ever been found and by 1920 the system had been completely redesigned with some parts dropped, some added, and the rest made appreciably smaller – by about two-thirds in the case of the 'lozenges'. Also the parts were nickelled instead of being painted black. This piece is based on details, kindly sent by Jacques Pitrat, of his set, virtually complete, but without a manual.

The box is red with a hinged lid and measures 470*285*55mm. Fig.1 shows the open box. The lid label is as described in OSN 24, but is in poor condition and a somewhat 'improved' version of it is shown in Fig.4. Three items are pasted to the inside the lid: top left is the circular logo shown in the RH column of 24/702; top right a square (Fig.3) with the flags of the 'Armées Alliées' (France, Belgium, Russia, and Britain, though the Red Ensign, the flag flown on merchant ships, is shown for Britain); and in the centre, its bottom can just be seen in Fig.1, a list of the parts in the set headed 'Composition de la Boîte No.1'. This is the only indication of the set's designation and it is uncertain if there were any larger sets at the time.

The parts in the inventory are listed below with quantities, my English names for them, their French name in brackets, and any points of interest. Drawings of most of the metal parts were given in 24/701 and nearly all the parts can be seen in Figs.1 & 2. The silver parts in Fig.2 are the 1920 parts for comparison – the only revised part which was larger was the Spanner!

- 26 **Lozenges** (Eléments) with the end holes (4.3mm Ø) at 150mm pitch.
- 14 **Half-Lozenges** (Demi-Eléments).
- 8 **Strips** (Traverses plates) with the end holes at 110mm pitch.
- 13 **DAS** & 4 **SAS** (Traverses coudées & Traverses plates et coudées) made from the Strip.
- 12 **Feet** (Pieds) – 'A' in Fig.2 – there is a hole in the upright lug, see OSN 24. In the Set they are in the open box top right.
- 50 **Bolts** (Boulons), 3.5mm Ø, 8mm u/h. The **Nuts**, hexagonal, 7mm A/F, 3mm thick, are not listed separately. The N&B are in the small white boxes on the left side of the box.
- 2 **Special Bolts** (Boulons spéciaux), 15mm u/h.
- 1 **Spanner** (Clé à boulons).
- 1 **Screwdriver** (Tournevis), missing from the Set.
- 2 **Bridge Abutments** (Culées métalliques). They are much larger than might be thought from OSN 24; the red inset in Fig.2 shows the 4



FIG.3

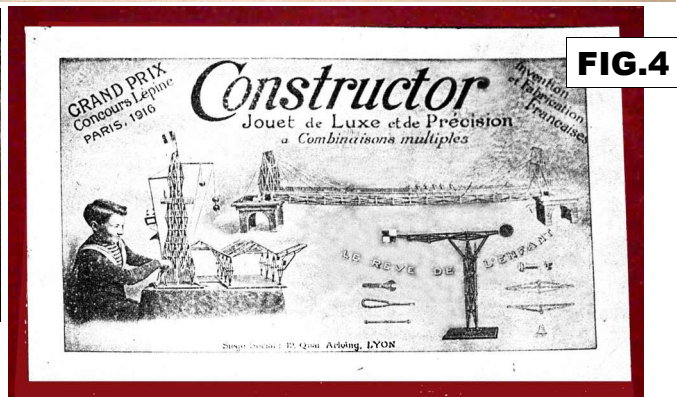
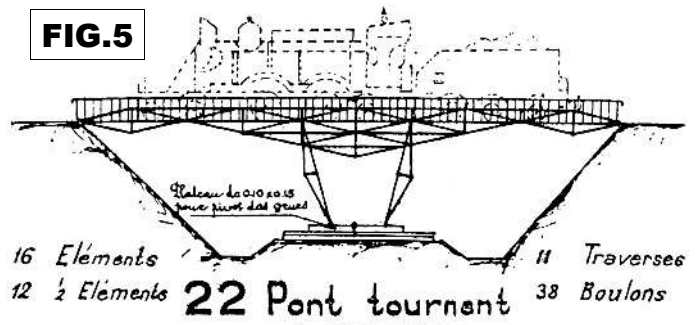


FIG.4

- holes at each end of the part.
- 8 **Woodscrews** (Vis) – not found: there is a printed slip in the Set which asks the purchaser to excuse the various imperfections due to the shortage of raw materials & skilled labour, and also that the 'vis' have been replaced by 'pointes' (drawing pins).
- 12 **Drawing Pins** (Pointes). A small round empty metal box for 12 pointes made by a manufacturer of office supplies is between the small white N&B boxes.
- 2 **Railings** (Gardes-corps), 'B' in Fig.2.
- **Winding Drum** (Treuil), made of wood with a 2.5mm Ø steel shaft formed

into cranks on either side, spaced 90° apart. • 1 **Pulley** (Poulie), wooden, 22mm Ø, not shown. There were no other Wheels or Gears in the Set. • 2 **Wooden Bases** (Plateaux) 230*145*10mm. • 2 **Wooden Bases** (Platelages), one 150*88*9mm, one the same width & thickness but 445mm long. [After 1920 there were only 2 Wooden Bases, called Planchettes, 110*110, 150mm & 5mm thick.] • 1 **Ladder** (Echelle de corde). 'C' in Fig.2 – a metal part though the French name means rope-ladder. • 1 **Ball of Cord** (Peloton de ficelle), now wound onto the Winding Drum. • 6 **Tent Panels** (Éléments de tente, later called Toile de tente – Tent Fabric). The red & white striped card. • 3 **Semaphore Balls** (Boules sémaphoriques), 30mm Ø, wooden, painted red, white, & black with small hooks at either end. • 4 **Emblems** (Pavillons), the card parts to the right of the Tent Panel. Pavillons can include ship's flags, signal flags, brand insignia, etc and from 1920 a different range were called 'Oriflammes et Signaux'. • 1 **Flag** (Drapeau), 1 **Disc** (Disque), 1 **Square** (Carré). More card parts, all sitting on

FIG.5



the Tent Panel. The Disc is made of red card; all the other cardboard parts in the Set are, unlike later versions, printed on only one side. The Disque & Carré were called round & square railway signal discs from 1920.

Fig.5 is another model from the manual described in 24/701, no doubt like the one missing from Jacques' set.

CONSTRUCTOR [0]: S2

OSN 42/1268

Snippet. 'New' System: CONSTRUMEC

The set shown here was seen on the Argentine Ebay and the lot consisted of the box (Figs.1 & 3), the loose manual pages (Fig.2) with the top one headed CONSTRUMEC, and a manual from the Argentinean INGENIERIA MECANICA INFANTIL (IMI) system. This manual's cover (Fig.4) is the same design as the IMI lid label, very different from CONSTRUMEC.



FIG.1

FIG.2



However there is a definite connection between the two systems because the CONSTRUMEC Illustrated Parts page (Fig.3) is, apart from the heading, identical with the corresponding IMI page in MCS. Whether the IMI manual was originally part of the Set isn't known, but its presence does mean that one can't rule out that the parts in the Set may be a mix of the two systems. The parts in 3 Ebay snippets of IMI outfits look identical to those in Fig.3 except that the red, blue & bright parts are sometimes in a different one of those colours, and the large Road Wheel & Pulley are a different colour in each case. This sort of variation is not uncommon in Argentine sets of the post-WW2 decade.

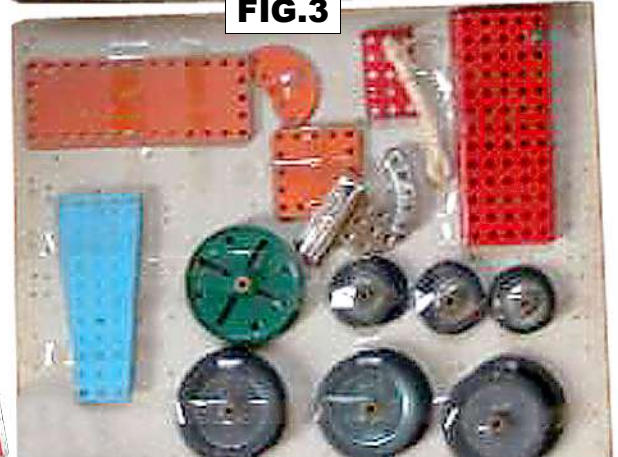


FIG.3

By scaling from the IMI Ebay photos, the pitch of the IMI holes is about 10mm, and from the MCS Illustrated Parts the Axles are described as 4mm, the Bolts as '3.95', and the Set Screws as 1/8" (BSW no doubt). Many of the 64 IMI parts are conventional looking but there are no slotted holes in the Plates & A/Gs, and unusual parts are the 7h Trunnions, the 11h long Flanged Sector Plate, the 5*9h & 5*13h Flanged Plates, and the 6h Bush Wheel & Wheel Disc, the latter with a large centre hole. The Flexible Plates are 3*5,13h & 5*5,11, 13h, plus 5*5h Curved & 'U' Plates. There are 9 Strips from 2-29h, plus a 5h Curved, and a Formed Slotted Strip. Also a 29h long A/G.

FIG.4

Some of these parts can be seen in Fig.3, and all the others there look like IMI except that if the bright part top right is a 13h A/G, it is not in any of the IMI Ebay sets, nor is it listed for IMI in MCS.



CONSTRUMEC: S1

OSN 42/1268

Snippets. DUX Aero Sets A number of items of interest have been seen on Ebay since the notes in 10/248 & 12/330. All but 3 of those to be discussed are included in a list of sets in a Copyright 1933 manual kindly sent by Jacques Pitrat. The exceptions are Sets 50, 106d, & 110, and so these would have been introduced later. Also included in the List, the Kreiselmotor (Flywheel Motor), see OSN 12.

Set 50. The set right was said to be pre-WW2 and its number has been presumed from the lid. It has simpler and no doubt smaller parts than in the standard sets 104-110 – a concept akin to Meccano's Nos.0 & 00 & the MECAVION Baby sets described in 40/1200. The basic Fuselage seems to be in one-piece with a bent down tab at the front to take the Propeller. In the Sketch 3 of the assembly instructions inside the lid (Fig.2) there looks to be a part filling the underside of the Fuselage between the Wings. If so it would stiffen the wing/fuselage joint, useful even for the Biplane since no interplane struts are shown. Other parts (see Fig.3) are a symmetrically tapered Wing with flanged root, right-angled Undercarriage Legs to give an unusually wide track, & the Fin with the tail wheel attached to the bottom of it. The Tailplane is probably largely hidden by the packet under the nose of the Fuselage. The 4 parts under the tip of the top left Wing may

be the Struts used to support the parasol wing in Sketch IV.



FIG.1



FIG.3

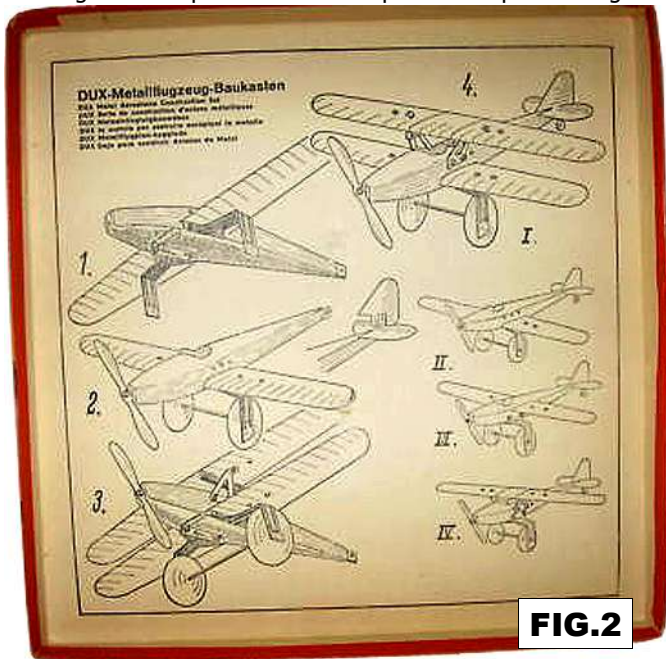


FIG.2

Set 104 with, possibly, an Electric Motor

Nr.104 is the smallest 'standard' DUX outfit, and has parts to make only monoplanes with a wheeled undercarriage. Unlike the larger sets the fuselage parts are arranged diagonally in the box. Right the Ebay set with the Electric Motor sitting on top of some of the fuselage side panels – otherwise the parts look identical to those in a standard set. (apart from the extra, unstrung 'Pulley' below the Screwdriver).

I wonder though if the Motor was actually part of the Set. First, the lid has just the 'DUX 104' legend of the 'standard' set with no indication that it is unusual in having a Motor. Secondly, the stringing, though correctly positioned, looks untidy, and the Wire Hanger on top of the Fin (to be attached to the top of the model to hang it up by) is not there in the several other strung sets seen. Thirdly, the Motor looks deeper than the sides of the base (though the lid aprons can't be seen in the Ebay photo).

If the Motor is genuine how & where it is mounted in the model isn't clear – it looks too deep to be situated anywhere

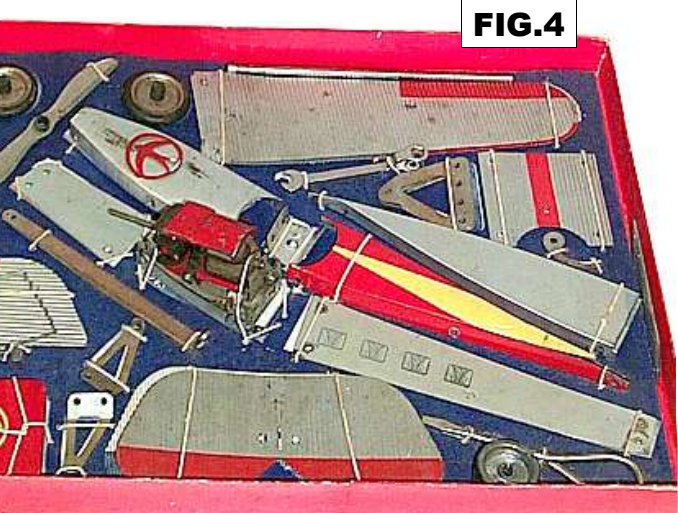


FIG.4

other than in the deepest part of the fuselage, and if it is then its shaft, despite being longer than usual, would need a considerable extension to reach the nose.

Set 106 Compared with Set 104 the main extra parts are a Radial Engine; & a Centre Plate to complete the underside of the fuselage. The main change though is that the Wings, Tailplane, & Fin have moveable ailerons, elevators & rudder.

Set 106a This converts the 106 into Set 108 (the latter shown in Fig.11) and the main additional parts are 4 parallel chord Wings; Floats; & the blue Z-Interplane Struts.

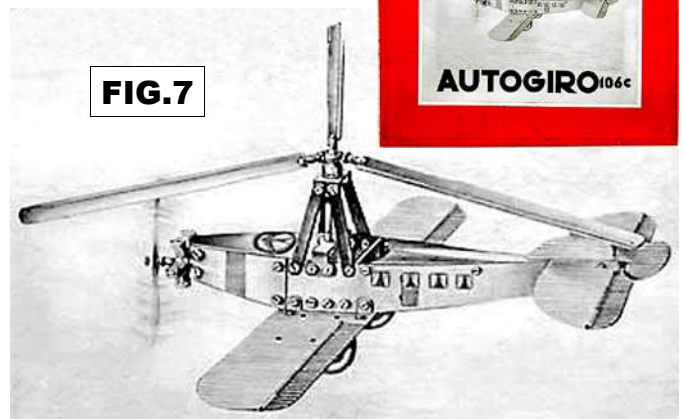
Set 106b Elektro Figs.5 & 6 below show the lid and parts from this add-on outfit. It includes an Electric Motor to drive the Propeller, and wing tip lights. The main parts are the Motor; Battery Container; red & blue Bulbs plus Bulb Holders;



a replacement Nose; replacement Nose & Rear Underside Fuselage Plates (with extra holes to mount the Motor & Battery Container); and a Propeller. The glass of the blue Bulb looks a little different to the red one and since one might expect a green Bulb as mate for the red, perhaps it is not original. Other parts, below the Nose Underside Plate, are 3 probable Switches, and an Extension Shaft to link the Motor & Propeller.

Set 106c Autogiro Another add-on set to convert the basic 106 machine into an Autogiro. Many of the parts in the box (Fig.8) can be seen in the model on the lid label (Fig.7, with the whole lid inset).

Blades. It would be nice to think that the rotor would autorotate when the model's owner ran along with it.



Set 106d Steuerwerk (Steering gear) It appears from the lid label below that the rudder & ailerons can be moved from the rudder pedals (a horizontal pivoted lever) & control column (joystick) in the cockpit, but that the elevators must be moved by hand, which seems rather a pity. With the control runs shown the only other type of model possible would be a Low Wing Monoplane. The parts with modified control surfaces (see Fig.10 overleaf) are a pair of parallel chord Wings; a pair of Tapered Wings; & a Fin. (Since Set 106 has no parallel chord Wings the other parts needed to build the Biplane on the lid



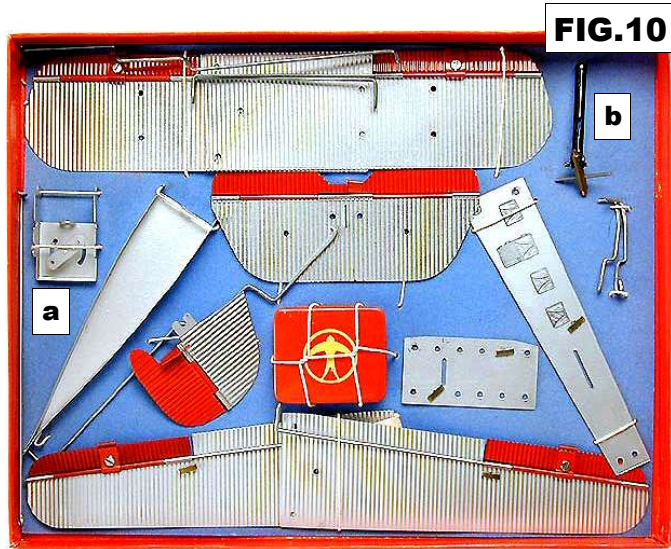


FIG.10

Interplane Struts, and the Wire Links to connect each pair of upper & lower ailerons. All these parts were in the linking set 106a but none can be seen in the 106d. Perhaps they are under other parts, or was a Set 106a also needed to build the model on the lid? If so only a Low Wing Monoplane would be possible with Sets 106+106d.) A Tailplane is also included in the Set but apart from having 2 extra holes, it looks identical to the one in Sets 106 & 108. Other main parts are a Rear Underside Plate; Rear & Centre Side Fuselage Plates, slotted for the Control Rods; & a Mounting Plate (at 'a'), which possibly replaces the Centre Underside Plate, to carry the Joystick & Rudder Pedals. The Mounting Plate has a double arm crank pivoted to it (it can just be seen at 'a') as rudder pedals, and looks to have lugs fore & aft to carry the brass fitting at the bottom of the Joystick (see 'b'). Each end of the brass fitting's small diameter cross rod probably engages with the right-angled end (U-shaped, see Fig.9) of a long Aileron Actuating Rod, and so the ailerons rotate when the Joystick is moved sideways, and in the correct sense, one up & one down.

would be a pair of unmodified parallel chord Wings, the Z-

Sets 108, 110, & a C/W Motor

The main characteristics of **Set 108** have already been mentioned and the photo right is included merely as a reference to the standard parts in the system. The Set's lid, below, is the pattern used for all the sets seen except 106b, c, & d, although in a few

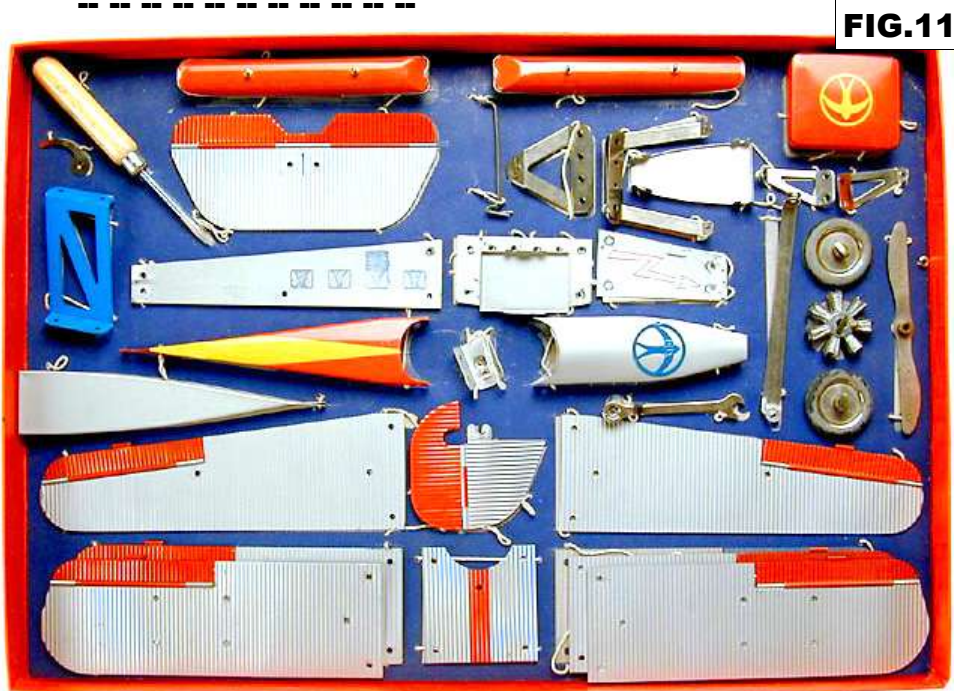


FIG.11



FIG.12

cases there is no set number, and some sets have different models in the circle.

Set 110 is referred to in the manuals seen for lesser sets but with no details. However the Set did have the 106d Steuerwerk parts because the Ebay 106d lot included a photo of a manual headed 'DUX - Metallflugzeug - Baukasten 110', and it included an illustration of the Biplane on the 106d lid fitted with the Steuerwerk parts and entitled 'Metall-Flugzeug mit Steuerwerk'. Beyond that it is conceivable that the 110 also contained some or all of the new parts in the Set 109 described below.

The Motor, right, includes a contrate drive to a pinion on a special Axle. Just visible above it in the photo is its red box, and on it in 7 languages is, in the English version, 'Clockwork Motor for Aeroplanes'.



FIG.13

Set 109 Flugboot Right the only, very poor, photo available of this outfit. The 1933 manual says that it is a set to make the Dornier Do.X & various other Flying Boats. A model almost certainly made from the parts is shown in Figs.15-17, and it is the featured model in the circle on the box lid. With a little imagination many of the parts can be seen in the box. The standard parts are probably the top of the fuselage, apart from the red cabin, the Wings outboard of a short Centre Section above the cabin (apart from some extra holes and being one hole longer because the root flange is left unmade), and the Tailplane. The Fin itself looks similar but the rudder has been extended downwards and a new Short Fin section added under the tailplane. The new parts are the one piece Fuselage



FIG.14

Bottom, the Fuselage Side Panels, the lower Stub Wings, the lower Under Tailplane, the Engine Nacelles (3 diagonally in each top corner of the box) and the Propellers.

Parts in the box that can't be seen in the model are the silver rectangular 'box' with convex sides between the Wings; the round part midway up the right side, sitting on top of the red Cabin; the Radial Engines on either side of the Stub Wings; and the 8 black cone shaped parts along the top – possibly nacelles for a radial engine, or more likely, half nacelles. If so, they are perhaps a little too small to match the Radial Engines already mentioned. These 'extra' parts, particularly the Engines and the black 'Cones', are presumably used in the other Flying Boats, and the 1933 manual says that several large aircraft can be made by combining the 109 parts with those in the 106 and 108.

To my mind the model is rather impressive and is obviously the Do.X. It looks the part although it's not exactly to scale: in particular the wings outside the engines need to be longer, as does the fuselage behind the wing, and the chord of the Fin and Tailplane are oversize. That last though is true of most DUX models, and I wonder what prototype the designer of DUX Aero had in mind when sizing the various basic parts.



FIG.15

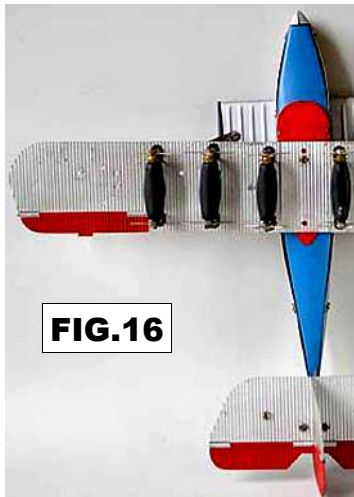


FIG.16

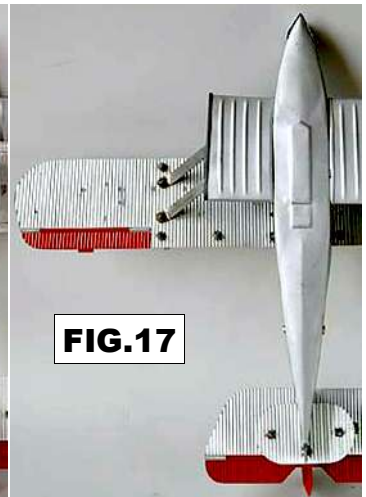


FIG.17

DUX AERO: S4

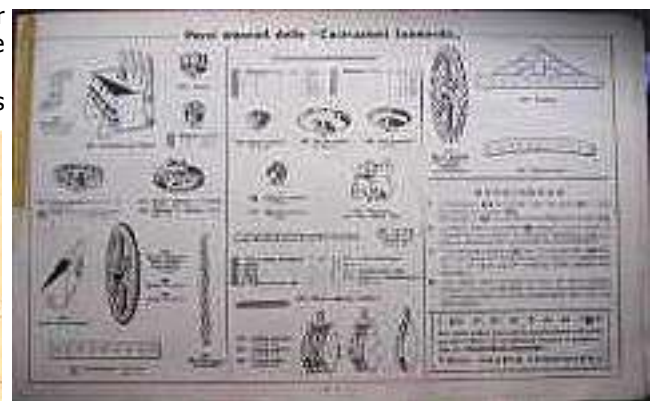
OSN 42/1272

Snippets. LEONARDO A note about a Leaflet advertising the 5 LEONARDO sets, Alpha to Epsilon, of this large Italian system appeared in 16/446. Since then the only additional material seen is 2 Ebay items, one a set in a wooden box and the other a Motor.

The Set was said to contain over 3000 parts, including 2 each of 220v & low voltage Motors, though it wasn't clear if some or all of these were part of the Set or extras. The manual with the Set was a '1946 edition'. The 3 Ebay photos, all very blurry, were the general view right; one of the 4 trays; and one of the manual page bottom right. Points of interest include:

- The Set matches the Epsilon described in OSN 16 fairly exactly. Of the 4 trays, the 2 which fit into the side of the box look to be full length; the 2 in the top are shorter, by about 20%.
- All the parts appear to be unpainted, and are perhaps nickelled. The parts in one of the longer trays seem to include extra long parts, possibly 49h A/Gs. Otherwise all that can be seen at all clearly are the 6-Spoke Wheels, some double Braced Girders, probably 25h long, and what might be a black cylindrical Motor sitting on the top of the lower of the 2 top trays.
- The parts that can be seen on the manual page include a Digger Bucket top left (& on re-examination one can also be seen in the Epsilon set in the Leaflet); a Dredger Bucket bottom left; 3 Pulley Blocks bottom centre; a 6-Spoke Sprocket Wheel top right; & a Triangular Girder Frame alongside it.

The Motor, right, looks conventional except that it has 3 pins on its connection panel. I wondered if, with suitable internal wiring, this would allow forward & reverse with the voltage applied across different pairs of pins, but I don't see how it could work. Another photo showed that the output shaft extends out from each sideplate.



LEONARDO: S1

OSN 42/1272

'New' Dutch System: IDEAAAL My thanks to Jan Ringnald for sending copies of all that is known of this TRIX-style system: that's to say a model leaflet, a long sheet printed on both sides and folded to give 8 faces, 162*250mm. The only reference to the name is in the middle of the first page, as right, with a model above, and the Mechanical Saw in Fig.2 below it. Loosely translating the text in Fig.1 reads 'The most enjoyable hours of the day! For older boys there is no greater pleasure than experimenting and exercising his skill. Here is an ideal building toy with all kinds of possibilities.'

Two sets are mentioned in the Leaflet, Nos.1 & 2, and from the different parts that can be seen in the models, they contain a range of parts broadly similar to TRIX Units A & B, but plus several items from the TRIX Unit C, and the composition of the sets varies between the two systems.

In the main the parts look similar to TRIX, but there is no indication of their dimensions. The main differences are as follows. IDEAAAL includes: a Flanged Plate which is 13h long (better than the 14h TRIX version) with no crossways stiffening ridges; a 5h Ø Disc and possibly a Narrow D/B (both Unit C parts in TRIX); 2 sizes of Pulley Disc (see the Vertical Steam Engine in Fig.3), of simpler design to the Unit C TRIX part; DAS made from 7 & 9h Strips (against the TRIX 7 & 11h, the latter in Unit C). Other variations include a simpler Hook (inset in Fig.3); and in some models the normal D/B

De
**prettigste
uurtjes
van de dag** !

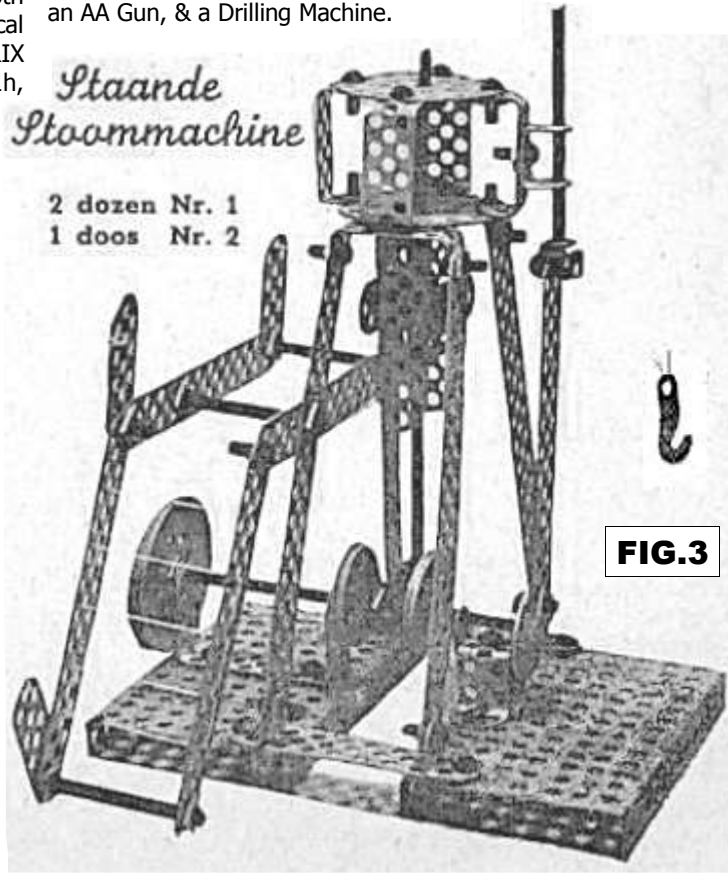
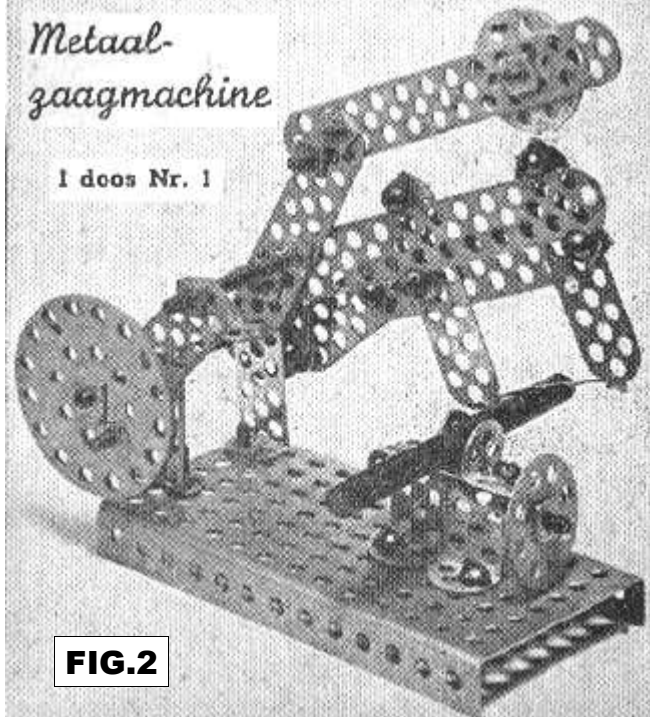
FIG.1

Voor de grotere jongen bestaat er geen groter genoegen, dan heerlijk te kunnen knutselen en zijn handigheid te oefenen

Hier is een IDEAAAL BOUWSPEL met velelele mogelijkheden

looks longer with different bend points (as in the support for the workpiece in Fig.2). The Bolt head is round and the Nut is square and very large. No IDEAAAL Tools are shown. On the Pulley Discs, the rims of the two sizes in Fig.3 look to be almost formed into a flange, and the smaller type is used in an Electric Loco said to run on 0-gauge track; but in other models the rim appears to be simply angled and absolutely flat.

20 models are shown in the Leaflet from Perronlorrie (Platform Truck) to Lorrie (a simple Truck with corner uprights). There is a halftone of each plus some building instructions. Half the models can be made from one Set 1, the others need a Set 2, and also for two, another Set 1. Most of the models are fairly simple but the better ones include all those already mentioned (except the Lorrie), 2 of the 3 Cranes, an AA Gun, & a Drilling Machine.



OSN 42/1273

IDEAAL: S1

Snippet. METABA

The name of this small German system was mentioned in 16/458 and now a set has been offered on Ebay. Or at least a box with some parts in it.

Said box has no partitions, it measures 17*17*3½cm, and from the lid, right, it is Set No.1.



FIG.1



picked out of a large jumble of pieces and

Figs.2-4 show examples of the parts – they have been

so are not all to quite the same scale. Assuming that the metal

OSN 42/1273

METABA: S1

ones are genuine they consist of some Strips & Brackets, 2 Pulley Discs, one of which looks like the TRIX variety, a TRIX-like Spanner, a Screwed Rod, and 2 sizes of Tyre.

By scaling the hole pitch is 7½mm, not far off TRIX. Unlike TRIX the spacing of the holes in the Large Pulley Disc matches the Strips and its diameter is about 28mm. All that can be said of the Tyres is that they look as if they might fit the Pulley Discs. The wooden parts in the box (Fig.3) have a hole pitch of

about 20mm have been considered foreigners.

For what it's worth the box contained about 20 each of the 3, 5, & 8h Strips, a dozen or so A/Bs, 4 large & 5 small Pulley Disc, 2 large & 1 small Tyre, 1 Spanner, and 1 Screwed Rod.



FIG.4

METABA: S2

OSN 42/1274

Snippets. JOLEI Brief details of this very small post-WW2 German system were given in 15/415. It was made by a firm called Jolei-Spiele in Hamburg and Baukästen gives the date as around 1945-50. The few sets that have been seen are all No.0's with the parts bolted to a backing card, as in Eisenzeit Plate 60 & Baukästen p218, with no sign of any outer

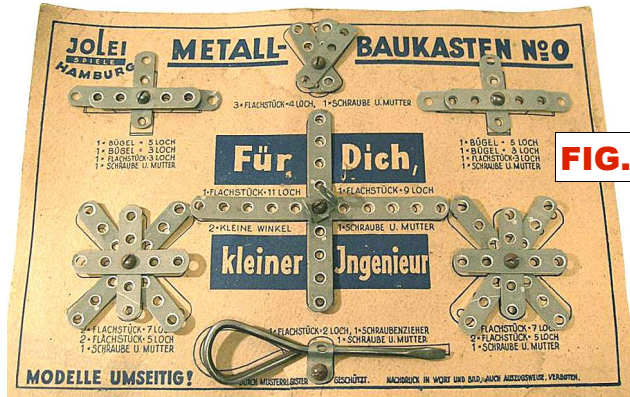


FIG.1

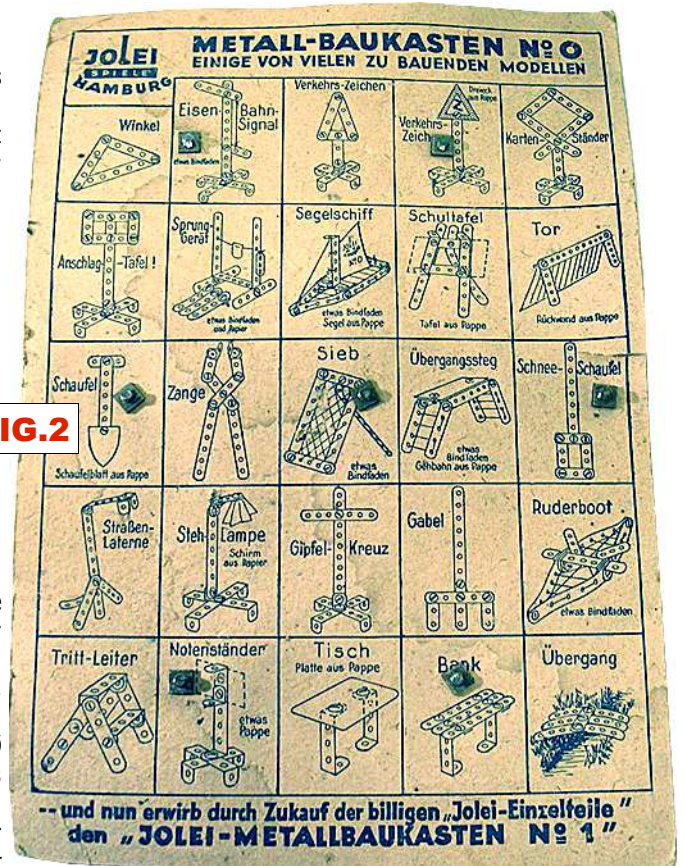


FIG.2

packaging. None of the sets is quite complete, including the one above – the names & quantities of the parts are printed under them on the card, and the parts in the top corners are incorrect, there should be 3 parts on each side, a 3h Strip, a 1*3*1h DAS, & a 1*5*1h DAS.

All the parts except the N&B are aluminium with 4.5mm Ø holes at 11.0mm pitch; the Strips are 11mm wide and all holes are round. The parts in total are: 1,2,3,4,4,1,1 of 2,3,4,5,7,9, 11h Strips (the 2h somewhat deformed, holds the Screwdriver in place); 2 each of the 3,5h long DAS; 2 A/B (held by the Bolt in the centre of the 9 & 11h Strips); 1 Screwdriver, 7 N&B (M4 perhaps, the Nuts can be seen in Fig.2).

The backing card is a little smaller than A4 (28*19cm) and on the reverse side (Fig.2) are 25 simple models. Paper & string to be supplied by the builder as necessary. The heading reads 'Some of the many models that can be built' and at the bottom is 'and now get more parts by buying Set No.1'.

No No.1 set is known but Fig.3 shows what seems to be a manual cover superimposed over one corner of a page of models. Over 50 models are claimed on the manual cover. The models are clearly much more ambitious than those for Set 0 but the range of different parts used in them may be little greater than for the No.0, supplemented by cardboard infill as necessary. There is a Parts List alongside each model and although the details can't be read, the longest seems to list no more than ten or a dozen different parts. I suppose there would be a winding shaft for the Crane, a Screwed Rod perhaps with a Strip as a handle, and possibly a Base Plate of some sort. No circular parts can be seen.

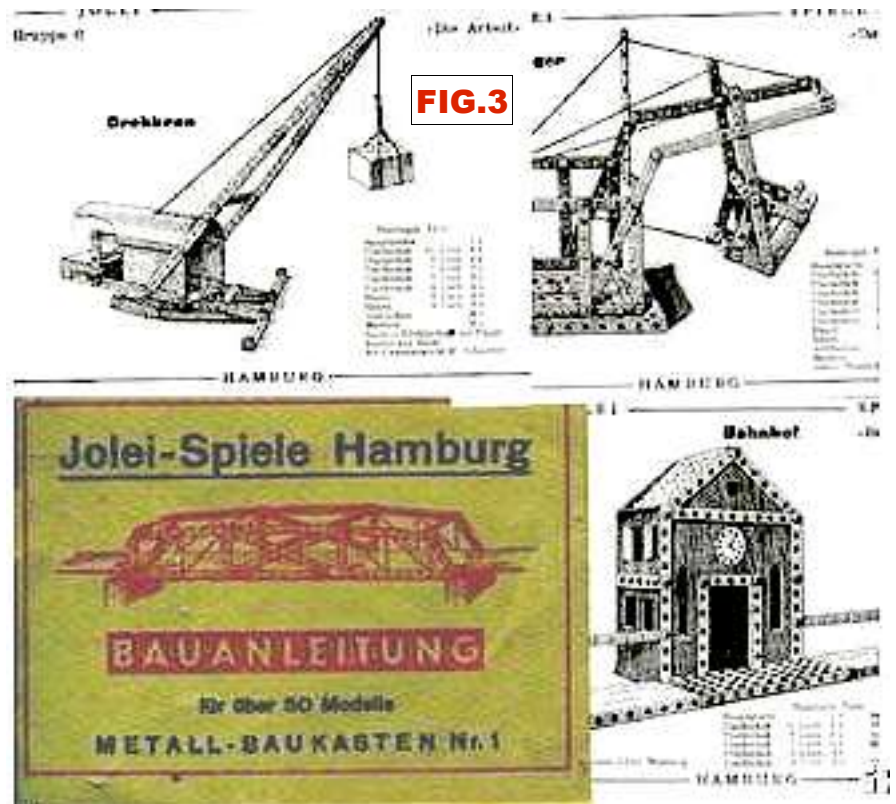


FIG.3

JOLEI: S1

OSN 42/1274

MINITECH by Jacques Pitrat

MCS has a brief entry for this French system, a short note about it appeared in 16/448, and there is a useful photo of a No.2 set in JCM. These notes are based on a mint No.3 set & its manual.

MINITECH was made by Joma, a manufacturer of very good quality toys at the end of the 1950s & in the '60s. For instance, it began to make slot cars, called 'Electro-Route' almost simultaneously with Scalectrix, and in 1958 it won second price at the 'Oscar du Jouet' for them. There is no information on the box or in the manual on the period of production of MINITECH but from the parts, the picture on the lid, & the data known on Joma, circa 1960, as given in OSN seems likely.

THE SETS Photos of four sets numbered 1 to 4 are in the manual. Also one of its pages has models for a No.0 set, so there must have been 5 different sets. No connecting sets are mentioned, but the manual indicates that separate parts could be bought. The sets are in cardboard boxes, with one layer of parts in Set 1, 2 in Sets 2 & 3, and 3 in Set 4. Sets 3 & 4 also have a side compartment for the Motor, the small parts boxes, and some other parts such as the Tools & the Angle Brackets.

THE No.3 box measures 427*305*45mm, and its lid, base with insert, and upper insert are shown in Figs.1-3 – in Figs.2 & 3 the parts on the inserts are symmetrical left/right. The inserts sit directly on top of one another (there is no tray for the upper one) with a sheet of paper between to protect the parts. In fact, at a glance it is not obvious that there is a lower layer of parts at all (the Ebay seller of the No.3 hadn't realised this until it was pointed out to him!). The Axles were originally on the upper tray, between the Wheels & the long blue Strips, held by four bits of sticky tape. But the tape has lost its grip and the Axles & tape are now in the side compartment (the eight marks the tape made can still be seen on the insert).

FIG.1



THE PARTS The system is presented as a 'jeu de construction miniature', and indeed, it is possible to build small models. The manual indicates that it is particularly adapted for building bridges which match the 1:86 scale of the electric trains popular in France at the time. The **holes** are at a pitch of 9.5mm and have a diameter of 2.5mm. The parts are well made in painted steel except that the Gears & one Pulley are moulded in high resistance plastic. The quality of all the parts is very good, and

they still look as new. Most of the parts can be seen in Figs.2 & 3 but below a list of them with some explanatory notes and the quantities in Set 3 in brackets.

Strips. The blue ones are 9.6mm wide and the two rows of staggered holes have: 31-30h (6), 16-15h (6), 11-10h (10), 6-5h (6), 4-3h (6). The yellow **Narrow Strips** are 5.0mm wide with just one row of 11 holes (16).

A/G. Blue with 31-30h (6), 16-15h (6), 11-10h (6), 6-5h (6).

A/B. Blue, the same width as the Strips, and they look as if made from a 2-2h strip bent in the middle: that's to say two holes diagonally opposed in each face (8).

Flat Trunnion. Yellow with 5-4h holes along the base and 3 holes vertically above these. (8).

Base Plates. Yellow, with each of their two flanges having one row of holes which are staggered relative to the rows on the top & with one extra hole: 10*5h (2); 5*5h (2); 5x3h (4).

Wheels & Pulleys. Except where stated all are brass with a brass boss, double-tapped with the same thread as the N&B. **Plastic Pulley**, 50mm Ø (4). **Pulley**, 25mm Ø (6). **Flanged Wheel**, 20mm Ø (4). The boss is inside the flange, and two holes are made in the flange so that the Screwdriver can reach the Grub Screw. **Pulley**, 10 mm Ø (4+1 on the Motor). **Pulley without boss**, 10mm Ø (12).

FIG.2

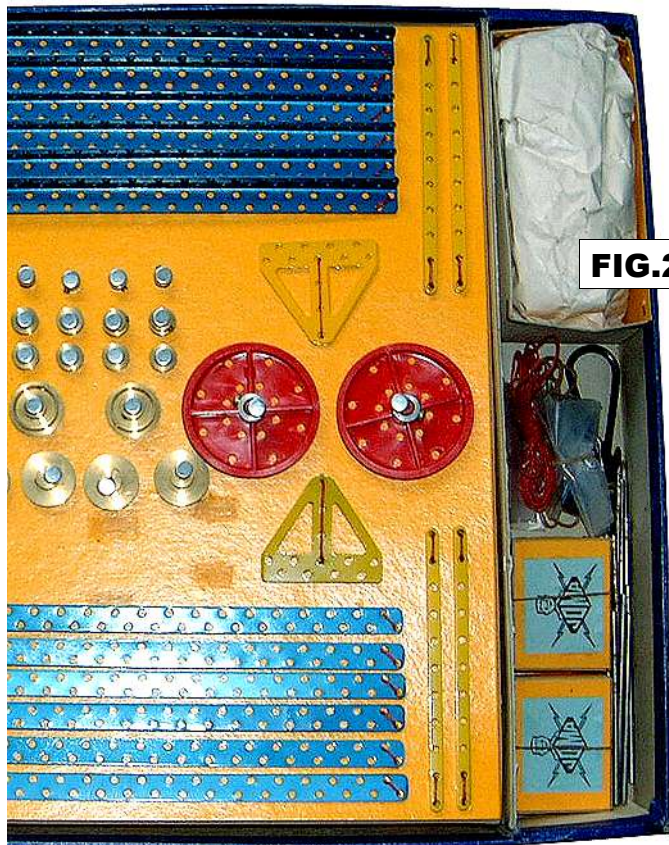
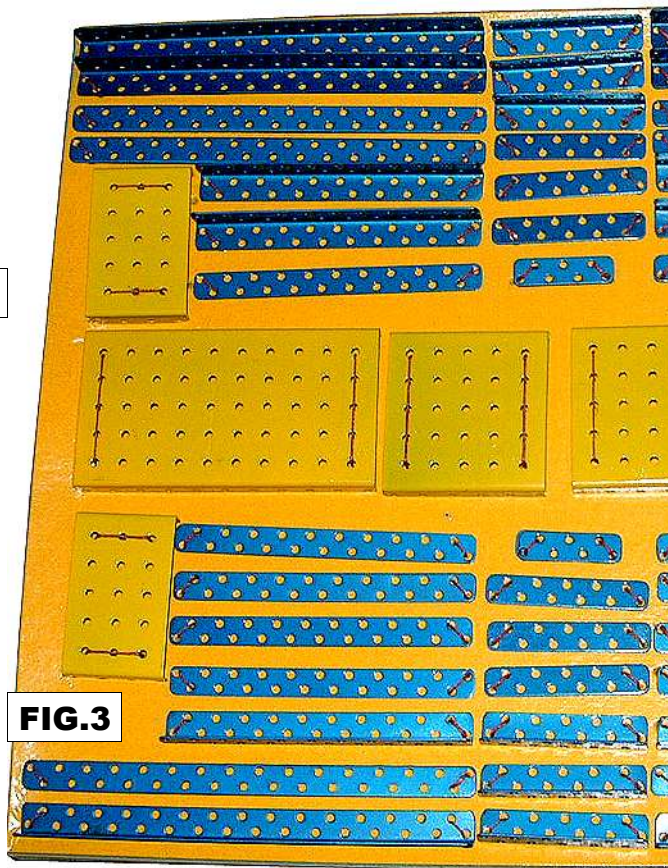


FIG.3



Brass Collar (8).

Axles, 2.5mm Ø. 122mm (4); 72mm (6); 26mm (4).

Crank Handle, 80mm (1).

Hank of Cord, red (1).

Bolts, 2.5mm Ø, cheeseheaded: brass 9mm long (17), and brassed steel 6mm long (70).

Nuts, hexagonal, 4.2mm A/F, thickness 2.0mm (89). Curiously enough, although all of them look alike, some are brass and others are brassed steel!

Screwdriver, black Meccano-style, made from 3.0mm diameter wire so that it can go through the holes in the flanges of the Flanged Wheels (1).

Spanner, black, single-ended, length 55 mm. (1).

Geared Motor (right) which can be supplied by a 4.5V battery or a Joma transformer. It has 5 output axles with speeds of 3000, 1000, 333, 111, & 37rpm.

Set 4 has a few different parts: a Worm, 2 Gears, & an 'engrenage d'angle'. This last could describe a contrate wheel or a bevel gear and it is not easy to decide which from the blurry picture of Set 4 in the manual. The Gears can just be seen at the left end of Fig.7 – one seems to have the same diameter as the 50mm Pulley, & the smaller one would be a little larger than the 25mm Pulley. The 'engrenage d'angle' does not explicitly appear in any of the Set 4 models, although it is likely to be hidden behind Plates in some of them. It seems that Set 4 also contains a Coupling (one can be seen on the long rod in Fig.7), and other lengths of Axles. And it has a Remote Control which can be used for changing the speed of the motor.

THE MANUAL has 16 pages 211*135mm printed on good quality paper, plus the covers. The front cover is shown in Fig.5, inside it has general information on the system; the inside back cover has the photos of Sets 1 to 4, and on its outside publicity for Wonder, a battery manufacturer. Its batteries appear in the Set 3 models, for Set 4 they are inside the Remote Control unit. There is neither an illustration of the different parts, nor a list of contents. 6 models are shown for Set 0, 8 for Set 1, 5 for Set 2, 4 for

FIG.5



Set 3 & also 4 for Set 4. All the Set 3 & 4 models are powered & go from 301 Ascenseur de mine to 316, the Bridge below, and 404 Grue géante sur rails à flèche pivotante (Block-setting Crane) to 422 Excavateur télé-comandé. The other models are two more Cranes, a Giant Swing, & the Lathe in Fig.7. It

is difficult to see the details of the models from the photos, and there is only one photo for each (except one model for Set 4 which has two, one for each side); moreover, there are neither detailed views of difficult subassemblies, nor instructions. For example, it would be interesting to see the mechanisms of the Lathe, most of them are hidden under Plates. I doubt that the users could easily build the Set 4 models.

The numbering of the models is curious. Three numbers are used, the first represents the set: 302 is a model for Set 3. But the last two numbers do not follow the sequence of models, for instance the four models for Set 4 are numbered 404, 408, 420, and 422. And the last two numbers do not indicate a numbering of the models independently of their set since there are a 015, a 115, & a 315. Does that indicate that there were many other models, and that this manual only displays a small part of them? The highest numbers for each set are: 022, 133, 230, 316, and 422.

FIG.4

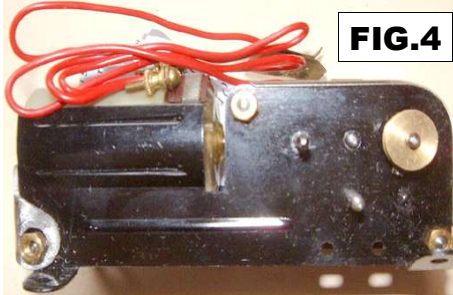
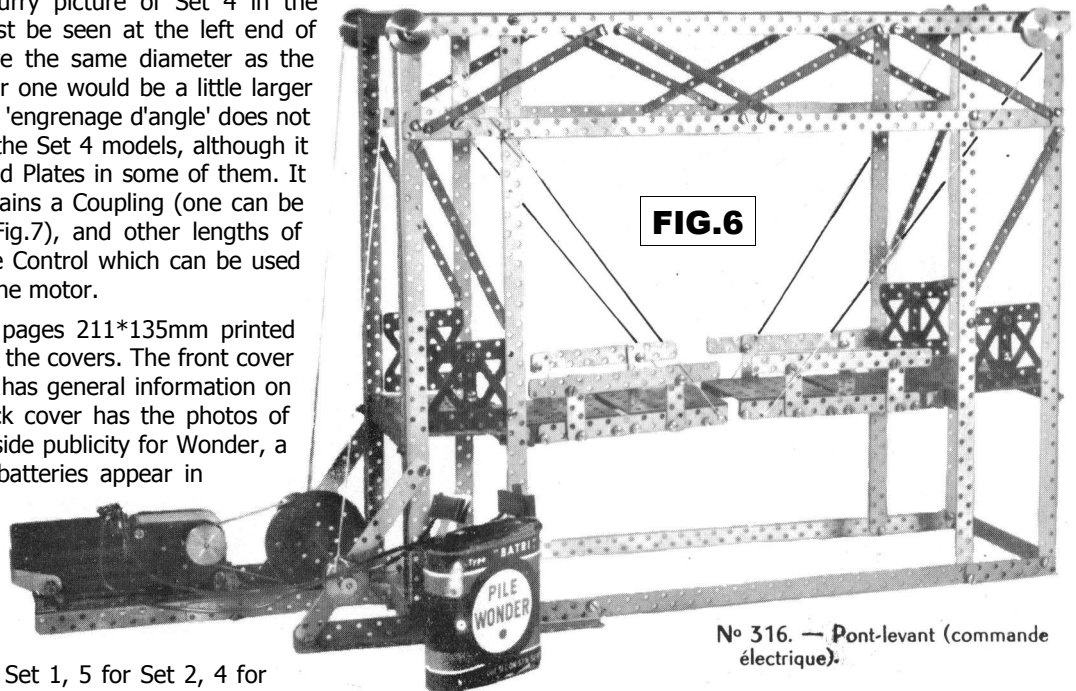


FIG.6

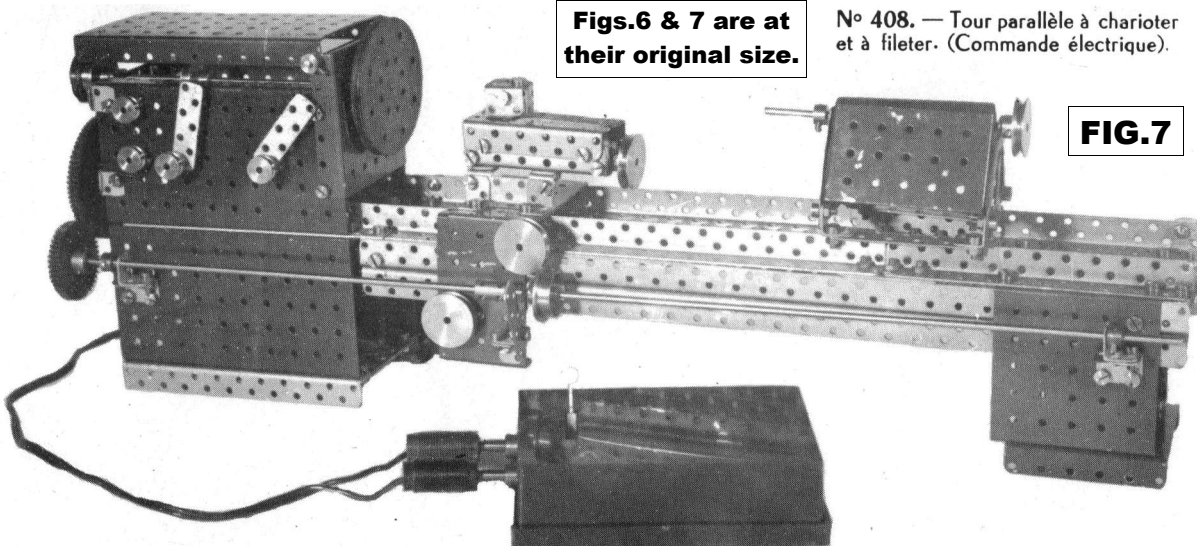


N° 316. — Pont-levant (commande électrique).

Figs.6 & 7 are at their original size.

N° 408. — Tour parallèle à chariotier et à fileter. (Commande électrique).

FIG.7



COMMENTS

MINITECH has very good quality parts, and a good supply of them. Unfortunately, the manual models are rather disappointing: it would be possible to make more interesting models, and to provide better instructions. The contents of the manual have certainly not the quality of the sets, which probably explains why these sets are so rare.

Snippets. DER JUNGE BAUMEISTER This was a small German system with mainly conventional parts. They are generally akin to MÄRKLIN though mostly made of aluminium and often with fewer holes. These notes are based on 6 sets seen on Ebay, all similar, and all probably quite complete, but in poor boxes. Also on one in Baukästen (p218), and a smaller set which will be described at the end.

Maker: Feta GmbH Fertigungsgesellschaft technischer Artikel (technical articles manufacturing company) of Braunschweig (a city 50km east of Hannover), Goslar.

Date: 1947-49 (from Baukästen).

References: Baukästen gives just the maker and the date.

The PARTS HOLES All holes are round and according to one of the Ebay items they are 4.5mm Ø at 13mm pitch.

Material/Finish The structural parts and Wheels are plain aluminium. Axles, N&B, etc are probably steel.

List of Parts Fig.2 is one side of the Model Sheet – with illustrations of the parts under a list of them, and their quantities. The list is difficult to read and so my English version follows, with the quantities in curly brackets, and my remarks in square ones. The actual parts match the illustrations except as stated.

#1,2,3,6,7,9 Strips 24,11,7,5,3,2h {4,4,2,8,2,4} [They are said to be 12.9mm wide and 1¼mm thick.]

#4,8 Double Brackets 1,3h high {1,1}

#5 DAS 1*5*1h {4}

#10 A/B {12}

#11,12 Axles, 105,50mm long {2,2}

#13 Crank Handle, 170mm long {1}

#14 Pulley, 25mm Ø {2}

#15 Loose Pulley, 12mm Ø {1}

#16 Bush Wheel, 40mm Ø {1}

#17 Flanged Disc Pulley, 65mm Ø {2}

#18 Flanged Plate, 11*5h, 140*65mm {1}

#19 Flanged Sector Plate, 100*65mm {2}

#20 Hook {1}

#21 Span'driver {2}

#22 Gear, 17t {1} [The illustration shows more teeth. This also applies to #23.]

#23 Gear Ring, 31t [though the '1' is blurry and may be incorrect] {1}

#24 Collar, 10mm Ø, 8mm long {4}

#25,26 Bolts, M4, 6,10mm {30,10} [In 2 of the Sets the Bolts can be seen clearly and have mush heads in one and pan heads in the other. Both types are steel.]

#27 Nut, M4 {40}

#28 Set Screw, M3, 6mm long {10}

#29 Washer, 4.2mm Ø {10}

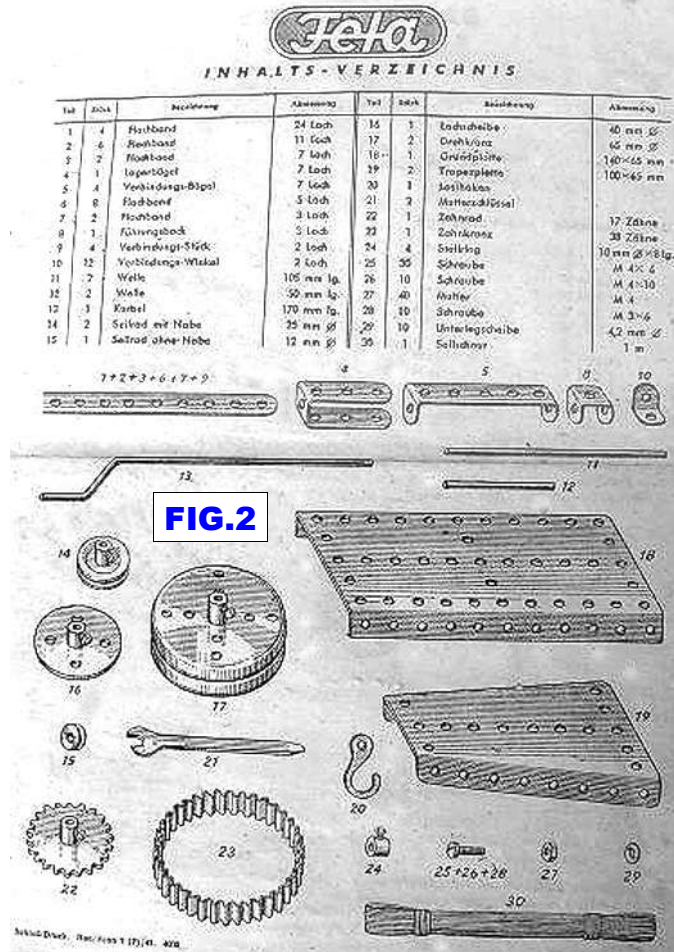
#30 Hank of Cord, 1m {1}

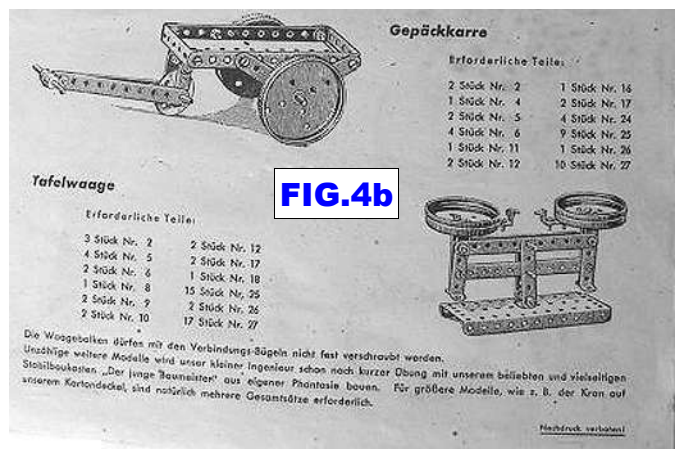
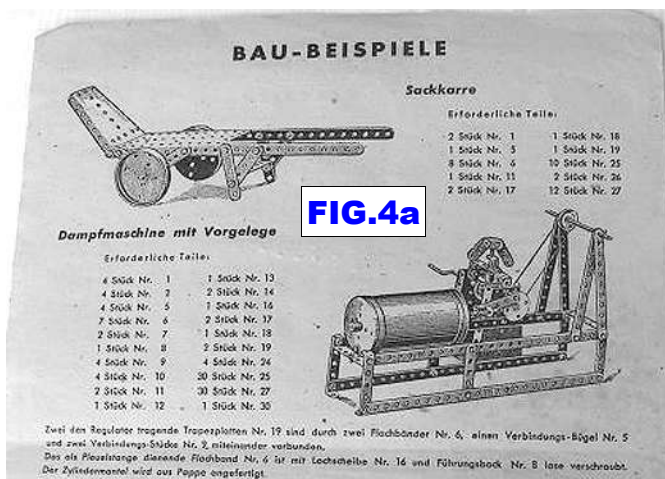
Also in several of the Sets fat **Rubber Rings** to fit the 25mm Pulley.

The SET There is no indication that the Ebay & Baukästen sets ever had a number or other means of identification. The box, 16*33cm, was plain cardboard with a label (Fig.1) which nearly covered the lid. (The Baukästen set has a 'reconstructed' red lid and the dimensions given for the set are probably incorrect.) The partitioning in the Baukästen set gives 7 compartments and matches what remains, or can be seen, in the Ebay outfits.

The MODEL SHEET This is about A4 in size, folded once to fit in the box. As already mentioned one side (Fig.2) has the Illustrated Parts & List of Parts; the other has 4 models, and Figs.4a & 4b. show the top & bottom halves of it.

The SMALLER SET This is shown right (Fig.3) and the Feta logo can just be seen in the bottom left corner of the lid label. Literally its name, 'Ersatzkasten A', means 'Replacement Set A' but quite what that signifies I'm not sure. At any rate presumably the Set contains enough parts to make the Crane. And, witness the drawing of the Crane, the 4 Rubber Rings do





belong to the Set. The sheet with the Crane on it looks like a

single leaf sitting on a box, or perhaps a book, but it could be a pile of other sheets.

DER JUNGE BAUMEISTER [1]: S2

OSN 42/1278

Snippets. DER JUNGE BAUMEISTER This was another small German system with the same name as the one on the previous page but otherwise unrelated. It has a few unusual parts and this account is based on 5 sets seen on Ebay, all with a fair number of parts in them but none complete. And it is unlikely that the layout of the parts in any of them is correct. 3 of the Sets are judged to be earlier than the other two and have predominately green parts; in one of the later ones they are red & dark green (or possibly black), and in the other red & blue.

Maker: Wehma GmbH, Mandeln (a village roughly midway between Düsseldorf and Frankfurt), Hessen.

Date: 1940s.

References: Baukästen gives the maker and the date.

The PARTS Holes All holes are round. The only indication of their pitch is by comparison with some foreign parts in one of the Sets. They look like MÄRKLIN but may not all be because depending on which parts are being used as the basis of comparison, and assuming their hole pitch is 1/2", the corresponding DJB values vary from 14 1/2 to 15mm. Given this the holes look to be 3mm Ø or a little more.

Finish The Pulleys are yellow in all the Sets. In the earlier outfits all the other main parts are green. Fig.B is one of the later sets and in the second the blue parts look dark green or black.

List of Parts Those not visible in Fig.B are shown in red.

Strips 2,3,4,5,6,8,10,12h, and possibly 7 & 9h. They look to have raised edges on their top face, rather like STOKYS. Ends have a large radius but are square in the early parts.

DAS 1*2*1, 1*5*1h.

Narrow Strips 3,4,5,6,8,10h. Only one of the sets, an earlier one, has all of these in it. **Narrow DAS** 1*3*1h. [Narrow Strips might be thought a bit of a luxury in a system which doesn't even seem to have a Bush Wheel.]

Brackets 1*1, 1*2, 1*3h A/Bs.

Plates **Triangular**, 5*2h. **Perforated:** 2*7, 2*14, 3*7, 3*14h. The early parts have sharp corners; they are slightly rounded in the later ones.

Wheels The only circular part in the 2h Ø **Pulley**. It has a roundheaded **Set Screw**.

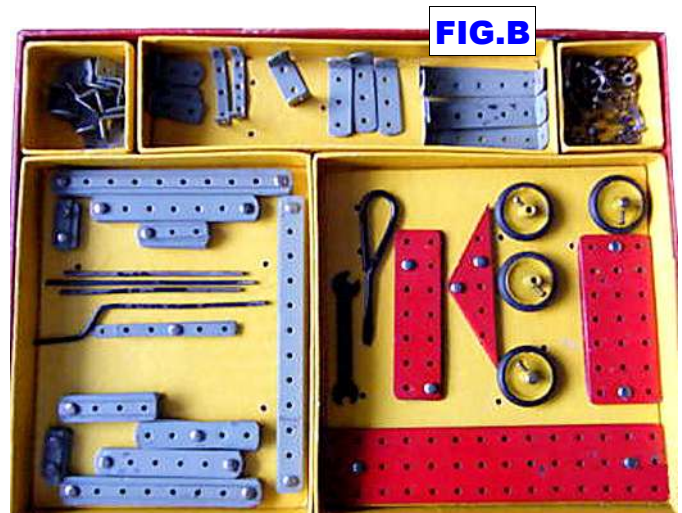
Axles etc 2 (quite similar) lengths and a Crank Handle.

Other Parts A **Collar**, possibly aluminium. A **Rubber Ring** for the Pulley, but only in the later sets.

N&B Bright hexagonal Nuts & cheeseheaded **Bolts**.

Tools All the Sets have the Fig.B **Screwdriver**. The later sets have a 2-ended **Spanner**, as in Fig.B, but in the early ones the **Spanner** is an unperforated black strip with a round-bottomed notch in one end.

The SETS All the Sets have red boxes with the Fig.A lid label. Some have a ring with the set number in it rubber stamped



above the left end of the model on the lid, but the photos aren't clear enough to read it. In the earlier sets the inside of the bases and the trays in them, are plain cardboard; the later ones are yellow, as in Fig.B.

The two later, and one of the earlier boxes, are divided internally by 5 trays, as in Fig.B. The other two earlier sets are in smaller boxes with most (instead of about 50%) of the lid covered by the label, and have only 4 trays.

The MANUAL The manual cover for one of the older small sets was shown and is identical to the lid label except that there is no text under the model and WEHMA at the top is blue. It was said of the red/blue later set that its manual contains 24 models and the printer was K Mauderbach of Dillenburg (a town 12km from Mandeln).

DER JUNGE BAUMEISTER [2]: S1

OSN 42/1278

PROTO This was the British 'professional' system which was introduced in the late 1950s or early 1960s by Weyco (Sales) Ltd, the then UK agent for FAC (see 18/508), and at that time it was called the WEYCO CONSTRUCTION SYSTEM (see 19/526). It was a no-frills system and essentially consisted of structural parts, ball bearings, and a range of gears. The structures were made from slotted A/Gs rather than the FAC Beams, and/or 4mm Rods, as in FAC but joined by Hubs, Rod Sockets, and just 2 of the many FAC Clamping Plates. It was like FAC in having holes at 14mm pitch, M3 thread, Mod .7 Gears, and 4 & 6mm Shafts. It lacked FAC's plates & circular parts but actually included a wider range of Spur Gears.



FIG.1

Shortly after its launch the company changed its name to Model & Prototype Systems Ltd. and the system became PROTO. Thereafter additional parts were added over the years, and after the company had changed hands at least once it ceased trading in 2005. Many of the parts are still available though, from S.P. (Stephen) Birch (the company's last MD), 105 Horse St., Bristol, BS37 6DF, Tel: 01454 883300.

This article is based on 1) an early set which is nearly complete except for some of the Rods & Shafts, and includes a manual and various leaflets; and 2) items of literature which show the progress of the system. My thanks to Stephen for his help in tracing the history of the company.

c.1965 at Dames Road

The Early Set The leaflets with the set included a Parts Price List dated Nov. 1964. The company's address was the same as Weyco's, 18 Dames Road, London, E.7.

The **Set** was advertised as having 'approximately 1330 parts and was referred to as the Proto Constructional System (PN: P.C.S.). The only other outfit at the time was the Proto Structural Kit (P.S.S.), packed, like the P.C.S., in a wooden box, but a Leaflet with the Set marked 'Advance Publicity' gave details of a Proto Construction System Major Kit (P.C.S.M.) with approximately 3360 parts, including a few not in the Constructional Kit, notably a Gearbox and a Geared Motor.

The **box** measures 15¼*23⅜*3¼", is of light wood, nicely varnished. Its hinged lid carries the 2*2½" silver label in Fig.1. Inside wooden partitions form 43 compartments of varying size for the parts, including one the full length of the box, and 10 for the N&B etc on a tray which can be lifted out. There is 1" clear above the partitioning and so room for a tray, but there is ample space for all the parts without one.

The **parts** are listed below with comments where appropriate, and the quantities in the Structural; Construction; & Major sets in curly brackets. As explained later the quantities in red & blue are those for these parts in similar sets in 1969, and the 1990s, though the smallest in the last period is an all-round outfits and so not comparable to the earlier Structural sets. In some cases I've preferred to call the parts by my own MECCANO-style names with where necessary, the M&PS name in brackets. The parts illustrated in Fig.2 are starred and can be identified by the initials of their M&P name (a way of denoting the parts used in M&PS literature). Unless otherwise stated the parts are steel, the toothed parts with a polished finish and other parts chemically blackened. The bosses of the toothed parts have 2 tappings & a pilot hole, equispaced, as in FAC. Apart from the Collar the other parts are single-tapped. With the few exceptions noted, the parts are accurately made and well finished.

• **Rods**, 24,38,52,66,89,94,108,136,556mm long, 4.0mm Ø with a light grey finish, possibly cadmium. {12 of each in each set. My set had only the 136 & 556mm sizes.} {10 of each in each set.} {as left}

• **A/G*** (Miniature Slotted Angle), 558.8mm long with 20 slots. The length given on the drawing is correct but the slots are actually 3.2mm wide & 17.3 mm long, with 11.1 mm between them (all dimensions approximate). The metal is 1.3mm thick. {36; 12; 36} {20; 10; 20} {10; 20; 20}

• **Fishplate*** (Fishplate Connector). Similar to the FAC part. A pair are used to join A/Gs end-to-end. Also 2 parallel Rods with a 3mm gap between them can be clamped at any angle to an A/G, effectively one Rod if the other is just the length of the Fishplate. {12; 12; 24} {10; 10; 30} {10; 10; 20}

• **Hub*** (Circular Universal Coupler). Brass (later aluminium alloy) with 5 tappings for Rod Connectors, and can be fast or loose on a Rod through the centre hole. It can be used as a bearing as well as its main role in Rod structures. {24; 32; 64} {20; 20; 40} {4; 4; 8}

• **Rod Socket*** (Threaded Sleeve). Used to attach Rods to Hubs, A/G, etc. {24; 32; 64} {20; 30; 40} {new design: 10; 20; 20}

• **J-Clamp*** (Universal Rod Coupler). A Zinc diecasting mainly intended to allow mock-ups to be made quickly, and to allow Rods to be added to existing structures without any dismantling. The manual says that Allen Grub Screws must be used in this part. A number of those in the Set had the slightly larger diameter Bolts instead and broke in two as they were removed. {12; 24; 48} {10; 10; 30} {not listed}

• **Rod Clamp*** (Rod Coupler) Better than the similar FAC part because it is flat on one side. A most useful part which holds a 4mm Rod very firmly. {12; 25; 48} {10; 20; 40} {10; 10; 10}

• **Threaded Sleeves, 5 & 12mm**. Brass, 4mm o.d. {0/0; 0/0; 12/12} {20/20; 20/20; 20/20} {10/10; 10/10; 20/20} Mainly for use with the Screwed Rod but none of the latter were included in the first Major Kit, nor in the final sets.

• **Fork Piece* & Tongued Piece*** (Elbow Connector, Female & Male) One of the holes in the Fork is tapped and the Tongued Piece is free to pivot on a through Bolt. These parts are mainly used as a pair to join 2 Rods at any angle up to a little more than 90°, but fully tightening the through Bolt doesn't lock the Elbow. The Fork Piece is also used to connect a Rod to a Rack Strip. {8/8; 8/8; 16/16} {10/10; 10/10; 10/10} {redesigned as Elbow Piece, see later: 5/5; 5/5; 5/5}

• **Shaft, 4 & 6mm** Silver steel, 556mm long, to be cut as required. Users are warned to avoid fully tightening Grubs on it before final assembly to avoid raised burr. {0/0; 2/2; 2/2} {0/0; 1/1; 2/2} {1/1; 1/1; 2/2}

• **Tubular Shaft**, 4/6mm Ø silver steel. {0; 0; 1} {as left} {not listed}

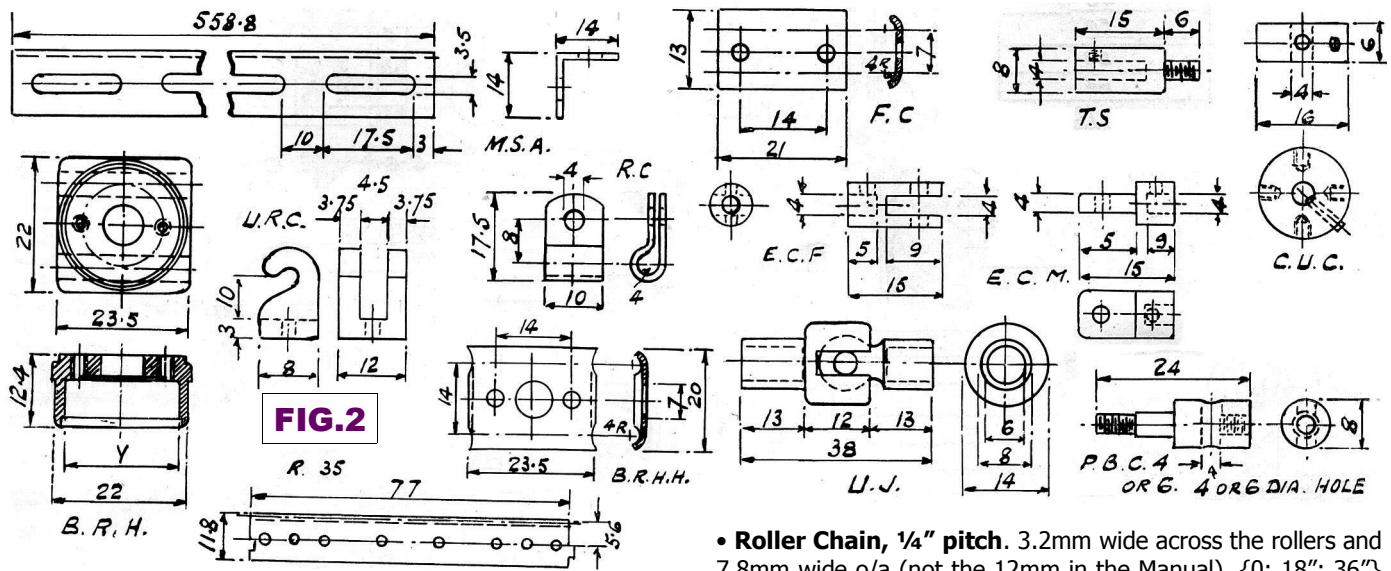
• **Pillar Bearing*, 4 & 6mm** (Plain Bearing or Connector, 4 & 6mm). Brass. The body of the actual part is 9mm Ø and the unthreaded shank is 4mm Ø and 6mm long. There is another version not shown, 36mm long o/a, with the threaded shank 18 rather than 6mm long. The 4mm part is also used to hold Rods, and the axial tapping allows Rods or Shafts to be locked in position. {0/0; 8/8; 16/16} {10/0; 10/10; 10/10} {as left}

• **Ball Race** 19.0mm Ø, 6.0mm wide, 6mm bore. No 4mm version was available. {0; 8; 16} {0; 8; 12} {4; 4; 8}

• **Ball Race Housing*** A zinc diecasting. The tapped holes in the back face (at 14mm pitch) can be used to attach the part directly onto an A/G, for instance, or to remove the Ball Race by alternately tightening Bolts in them. {0; 8; 16} {0; 8; 12} {4; 4; 8}

• **Ball Race Housing Holder*** Mainly intended to attach the Housing to a pair of parallel Rods, but can also clamp Rods to a suitable part. {12; 24; 48} {10; 20; 40} {16; 16; 16}

• **Pulleys 4 & 6mm bore**, brass, parallel sides, single tapped through the rounded groove, 16mm Ø, 5mm wide. {0/0; 0/0; 4/4} {0/0; 4/4; 4/4} {4/4; 4/4; 4/4}



- **Pulley Cord**, rubber 4mm Ø. Join with Bostik 1261 (later Loctite 406 or Super Glue 4) on oblique cut. {0; 0; 24"} {5mm Ø: 0; 0; 1m} {as left}
- **Sleeve** Brass, 4.0mm bore, 6.0mm o.d., 8mm long (not the 9mm shown). Used in a Ball Race bore to adapt it for use with a 4mm Shaft. {0; 6; 6} {Now nylon. 0; 8; 8} {8; 8; 8}
- **Collars, 4 & 6mm bore.** 11mm Ø & 5mm wide, diametrically double-tapped. {0/0; 12/12; 12/12} {10/0; 10/10; 10/10} {as left}
- **Universal Joint*** Light grey nylon with 6mm bores of a slight 'D' section, and the Shafts have to be filed to fit into them. The action (through 25°) is very stiff and later a second, freer type was also listed. {0; 2; 2} {as left} {2; 2; 2}
- **Spur Gears** with 15,16,20,24,30,32,40,48,50,56,60,64,70, 72,80,90,96,100,105* teeth, and from 10.5 to 72.5mm pcd. The 15 & 16t have a 4mm bore, the rest 6mm. All have a tooth width of 3mm. Bosses vary from 8.9 to (for most) 14mm Ø. The 32t has a light grey finish like the Rods. The 56-89t parts have 6 face holes at 28mm pcd; the larger Gears have an outer ring of 12 holes, staggered symmetrically in relation to the 6h ring, and at 54mm pcd. These pcd's allow all pairs of holes to be at 14mm pitch, but does not allow a part to be bolted on at two points along a radius (as one might with a MECCANO Face Plate for example). {none; 4 of 15-32t, 2 of 40-80t, 1 of 90-105t in both sets} {as left except only 1x 80t} {Sets supplied with parts with one of two selections of sizes: • 4; 4; 4 of (15 or 16t), (30 or 32t). • 0; 4; 4 of (20 or 24t). • 2; 2; 2 of (40t), (48 or 50t), (56 or 60 or 64t). • 1; 1; 1 of (70 or 72t), (90 or 96t). • 0; 1; 1 of (80t), (100 or 105t)}
- **Rack*** The teeth are 4mm wide. The end locators are a nice touch but one of the 2 Racks in the Set had them (and the holes) machined with the part, its teeth already cut, mounted wrong side up. {0; 2; 2} {as left} {1; 1; 1}
- **Rack**, 12" long. Has only 4 holes along its length, at 98mm pitch. {0; 0; 1} {as left} {as left}
- **Bevel Gears, 18 & 20+60t.** Mod .8, all with 6mm bores. Said to be brass but the 18 & 20t are steel. The 60t was also available with 6 face holes as #B.G.60A. {0, 0/0; 2, 1/1; 2, 1/1} {as left} {2, 0/0; 2, 1/1; 2, 1/1}
- **Worm** 2-start, 15.3mm o.d., 19mm o/a with 5mm long, 11mm Ø boss. {0; 1; 2} {as left} {1; 1; 1}
- **Worm Wheel** Tufnol, 40t, 30mm o.d., 5.3mm wide, with 14mm Ø steel boss. {0; 1; 2} {as left} {1; 1; 1}
- **Sprockets, 11 & 22t.** 25 & 47mm o.d with 2.7mm thick discs. {0/0; 2/2; 4/4} {0/0; 2/2; 2/2} {as left}

- **Roller Chain, 1/4" pitch.** 3.2mm wide across the rollers and 7.8mm wide o/a (not the 12mm in the Manual). {0; 18"; 36"} {0; 30cm; 30cm} {as left} Also a Connecting Link, Inner Link, Outer Link, & Clip Fastener. {0,0,0,0; 2,2,2,5; 2,2,2,5} {as left} {0,0,0,0; 2,0,0,0; 2,0,0,0}
- **7mm pitch Ladder Chain** to run on the Gears, although not listed, was said in the Manual to be available.
- **Fixings.** All nickelled except as noted. **Bolts**, 6,9,15,24mm u/h, cheeseheaded, 4.8mm Ø for the 6mm, 5½mm for the others. {100/100/100/50; 200/100/100/50; 400/200/200/100} {100/100/50/0; 200/100/100/50; 300/200/200/100} {100/100/0/0; 200/200/50/50; 200/200/100/100} **Nut**, machined, 2.4mm thick, 6.3mm A/F (at some later point 5.4mm, the M3 standard). {350; 200; 900} {300;400;800} {200; 200; 400}
- **Washers:** 3mm, 7.8mm Ø, dull grey finish; 4mm, 9.5mm Ø; 6mm, 12.7mm Ø. {350/0/0; 200/50/50; 900/50/50} {300/0/0; 200/50/50; 800/50/50} {100/50/50; 200/50/50; as left}
- **Grub Screws:** Allen recessed, 3.2 & 5.2mm long. {50/50; 50/50; 96/96} {20/20; 40/20; 60/40} {20/10; 30/10; 40/20}
- **Multi-ratio Gearbox** (Fig.3). 2½*17/8*2", with brass sideplates and 48 DP gears The input & output shafts are 6mm and the output gear is to be slid along its shaft and locked to mesh with 1 of 4 gears giving ratios of 1:1, 2:1, 4:1, or 8:1. {0; 0; 1} {as left} {as left}
- **Geared Motor** (Fig.4). 240v shaded-pole, 128rpm, 20in.oz torque. 2½*45/8*2" wide plus the 6mm Ø output shaft on each side of its open gearbox. {0; 0; 1} {Similar but with enclosed gearbox, see later. 0; 0; 1} {Different type, see later. 0; 0; 1}
- **Tools:** • **Spanner**, single-ended. {0; 1; 1} {1; 1; 1} {as left} • **Nut Runner.** {1; 1; 1} {as left} {as left} • **Allen Key.** {2; 2; 4} {4; 4; 4} {as left} • **Junior Hacksaw**, and **Blades.** {0/0; 0/0; 1/12} {0/0; 0/0; 1/10} {as left} • **Chain Pin Extractor.** {0;0;1} {as left} {not listed} Only the Allen Key has been seen.

The **Manual** (Fig.5) has 20 quarto art paper pages, plus covers. After p20 are the stubs of 8 neatly cut out pages which were added after the other pages (they are held by a single extra staple). pp1-2 has the Introduction with mention of the

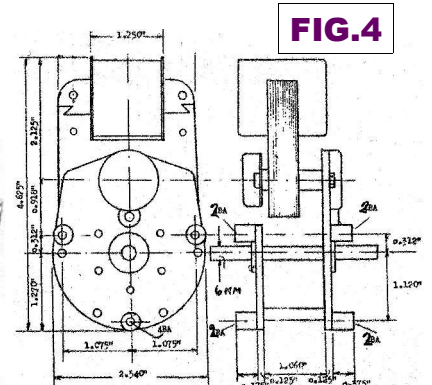
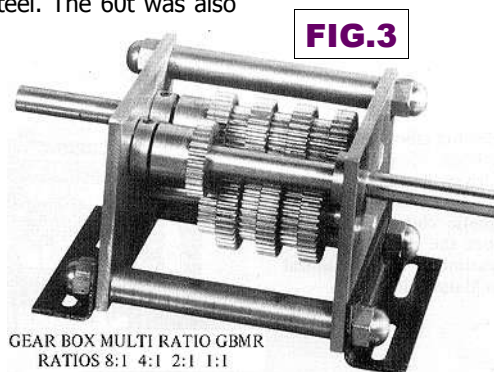


FIG.5

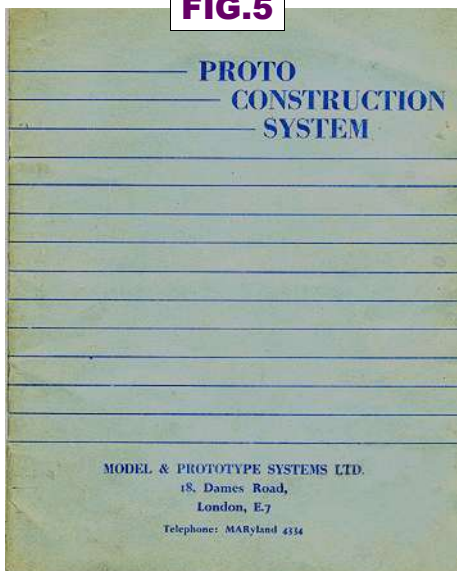


FIG.6

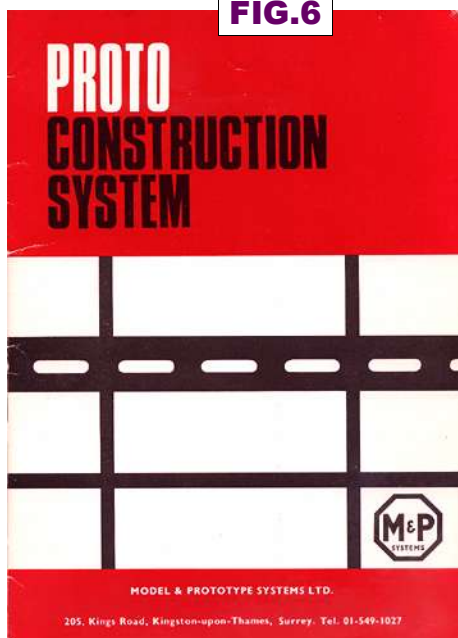
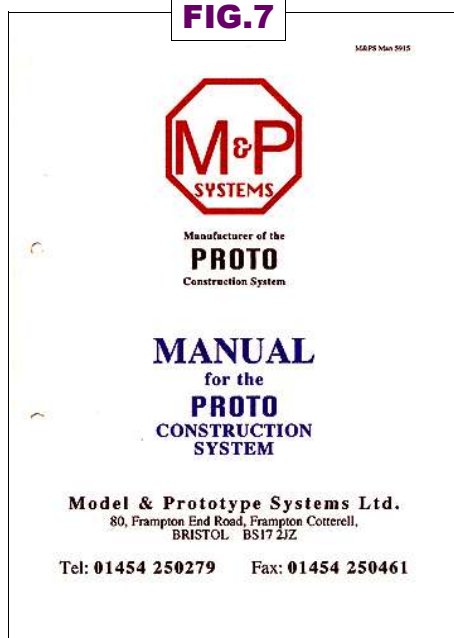


FIG.7



Structural & Construction kits, and their contents are listed on pp4-5. p3 has notes on the use of many of the parts, with references to 14 photos of partial structures on pp6-14. One of them is from the WEYCO publicity material. pp15-19 has engineering drawings of most of the parts. p20 is blank.

New Parts May, 1965 As well as the Motor, Hacksaw, Blades, Chain Pin Extractor & 12" Rack already mentioned: • A **Gear Checker**. • A **Spring Washer**. These parts will be described in the next section.

M&PS at Kingston Upon Thames c.1970

This section is based on documents from 1969, and others undated but a little later because they show additional parts. Those which show prices are from before Feb. 1971 because they use the pre-decimal £sd units, and all but one are probably before 1974 because none include a postcode (by then all areas had one). A publicity leaflet with a postcode talks of the system having been proven for over 20 years but gives no details of sets or parts.

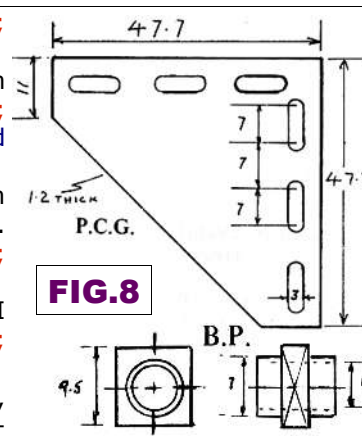
A price list dated March 1969 gives the address as 205 King's Road, Kingston-upon-Thames, and a letter in Sept. 1969 also gives the registered office as 52 King William Street, London, E.C.4, and the directors as B.P. & M.A. Hegarty, and H.W.Moore. It says that a completely revised manual will soon be available. A leaflet attached to this letter gives a few details of 9 Demonstration Kits (PDK.1-9) for fairly simple models showing the use of gears, sprockets, universals, and a 'Simple 2-speed and reverse gear'.

The 1969 Price List lists the same sets as before (except that the PN for the Major is now P.M.C.S.) and a photo from about the time shows the Major in a wooden box, the same length as the early set but deeper and not as wide. It has partitioning in the base for the long & deep parts, and 2 partitioned trays with 24 bays in each for the smaller items.

The contents of the sets given in the Price List is markedly different from before with many new parts but fewer of most of the earlier ones, mainly the structural pieces. For the earlier parts the contents are those given in red for the 1965 sets. The new parts with quantities, also in red, are listed below with details from a manual. The latter is probably the one in the 1969 letter and has one additional part compared with the Price List. The blue quantities are, as explained earlier, those for later sets. The starred parts are illustrated in Fig.8. From the Manual: most of the steel parts are zinc or cadmium plated, with a few nickelled and many of the toothed parts phosphated. None have the previous black finish.

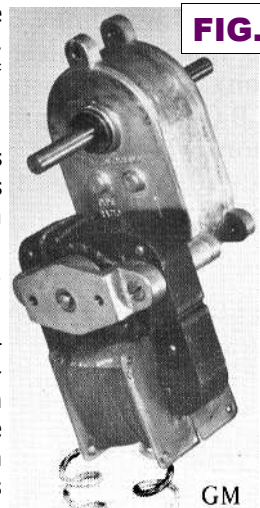
• **Plate, Slotted.** A 558.5mm length of the blank for the A/G before bending, 26.5mm wide. {5; 5; 5} {5; 5; 10}

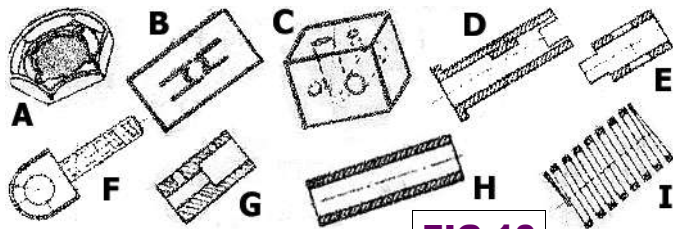
- **Corner Gusset***. {10; 10; 10} {as left}
- **Screwed Rod**, 156mm long, nickelled steel. {10; 10; 10} {brass, but not included in sets}
- **Pulley Belt** for 4 or 6mm Pulleys at 45/105mm centres. Neoprene, 3mm Ø. {0/0; 2/2; 2/2} {2/0; 2/2; 2/2}
- **Circlips 4 & 6mm.** Used, I think, as axle stops. {0/0; 0/0; 10/10} {as left}
- **Bearing, Plain***. Brass, 6mm bore, to be held between 2 Ball Race Bearing Holders {0; 8; 8} {8; 8; 8}



- **Universal Joint** Acetal with brass inserts, and single-tapped bores. 30° working range and said to have a much freer action than the original version. {0; 2; 2} {as left}
- **Gear Checker** A 308mm long rack with plastic scale to show the number of teeth on Spur Gears. {0; 0; 1} {not listed}
- **Wire Chain.** 7.25mm pitch ladder chain (not presumably the earlier 7mm). {0; 1m; 1m} {0; 0; 0}
- **Sprockets for Wire Chain, 9 & 18t.** 20.75 & 41.5cm pcd. Generally similar to the Sprockets for Roller Chain but brass. {0/0; 2/2; 2/2} {0/0; 0/0; 0/0}
- **Disc Hub.** A Bush Wheel with a 46mm disc & standard boss, the disc pierced with a ring of 6 holes on a 28mm pcd, 2 of which, diametrically opposite, are 4mm Ø. {0; 2; 2} {0; 0; 1}
- **Spring Washer.** No details given. {0; 100; 100} {as left}
- **Geared Motor** (right). Similar to the earlier type but with enclosed gearbox, and: 124 rpm, 2Lb-in torque, 144*61*60mm wide (plus shaft). {0; 0; 1} {0; 0; 0 of this style, see later.}
- **Geared Motor, Reversible.** As above but with a motor on both sides of the gearbox driving a common shaft. {0; 0; 0} {not listed}
- **Screwdriver**, 6". {1; 1; 1} {as left, 4" or 6"}

Bulletin No.4 This leaflet lists 4 new parts which were being introduced on a trial basis, and 14 which were specials only available while stocks last. They are listed below with the new parts first, and Fig.10 shows





the illustrations given (though some **FIG.10** are not altogether helpful).

- **6mm Shaft Connector** – not illustrated but will be described later.
- **Nut, Locking**, cadmium plated. Not included in the Later List below but eventually adopted. (A in Fig.10)
- **Plate, Ratchet**, blacked steel with versions for 4 & 6mm Rods. These two parts were not in later lists. (B)
- **Block, Connector**, brass. (C)
- **4mm Shaft Connector** – not illustrated.
- **Dog sliding**. (D?E)
- **Dog fixed**. (D?E)
- **Dog Shaft**, 4mm Ø x 556mm long. Not illustrated.
- **Eye, Screw**, 4mm eye with 12mm x M3. (F)
- **Reducer, Shaft**, 6/4mm. (G)
- **Sleeve**, 4 x 6 x 5,12,20,41,61mm long. (H)
- **Spring, compression**, 15 x 7.8 x 9.8. (I)
- **Spring, tension**, 278 x 4. Not illustrated.

The Manual It has 20 A4 pages plus covers but the pagination is 2-19 with the first & second pages unnumbered. The front cover (Fig.6) has the company's name & address in the bottom panel. The other covers are blank except for 'Printed By: CREATIVE OFFSET LTD., Tel: 01-549-0111' on C4.



FIG.11

The first page lists the contents and has the logo left by the company's details. The second page is blank. p2 has an introduction; p3 a few details under SPECIFICATION, followed by a list of the 3 sets which it says, are all in varnished wooden boxes. The parts are listed on pp4-11 with descriptions & drawings. p12 is headed APPLICATION and gives some advice on using the parts, with photos of mechanisms, structures etc on pp14-19. p13 shows 5 of the Demonstration Models and says sets of parts are available for them.

Only one new part is listed, the Coupling for 6mm Shafts mentioned above, and described below.

Later Material This consists of photocopies probably taken from a leaflet and an updated brochure or manual. In the former the sets are now called PROTO Major Construction Unit (PCU 1), Standard (PCU 2), & Basic (PCU3), but nothing is said of their contents except that all have parts intended to make both structures and mechanisms.

The other pages are like the Illustrated Parts in the manuals, and the parts are as before except for the new, modified, or deleted ones below.

- **A/G** Now 560mm long with different slots, see 'SA' in Fig.12. (The Slotted Plate is still based on the old pattern A/G).
- **Spacer** Brass 4/6mm Ø, 1mm wide.
- **Coupling** for 6mm Shafts. A brass tube 6/9.5mm Ø & 19.7mm long with a single tapping near each end.
- **4.0mm Roller Chain** and a **Connecting Link**.
- **Sprockets for 4mm Chain**. Brass with 12 & 24 teeth (15.25 & 30.50mm pcd) in the same style as the other Sprockets. 6mm bore.
- **Bolts** They now have a pan head.
- **Tubular Shaft & Reversing Motor** No longer listed.

M&PS near Bristol in the late 1990s

The company changed hands in the mid-1990s: the new directors were S.P. & E.J.Birch, and the new address was 80 Frampton End Road, Frampton Cotterell, Bristol BS17 2JZ. The two documents to hand are a Catalogue No.53, probably from

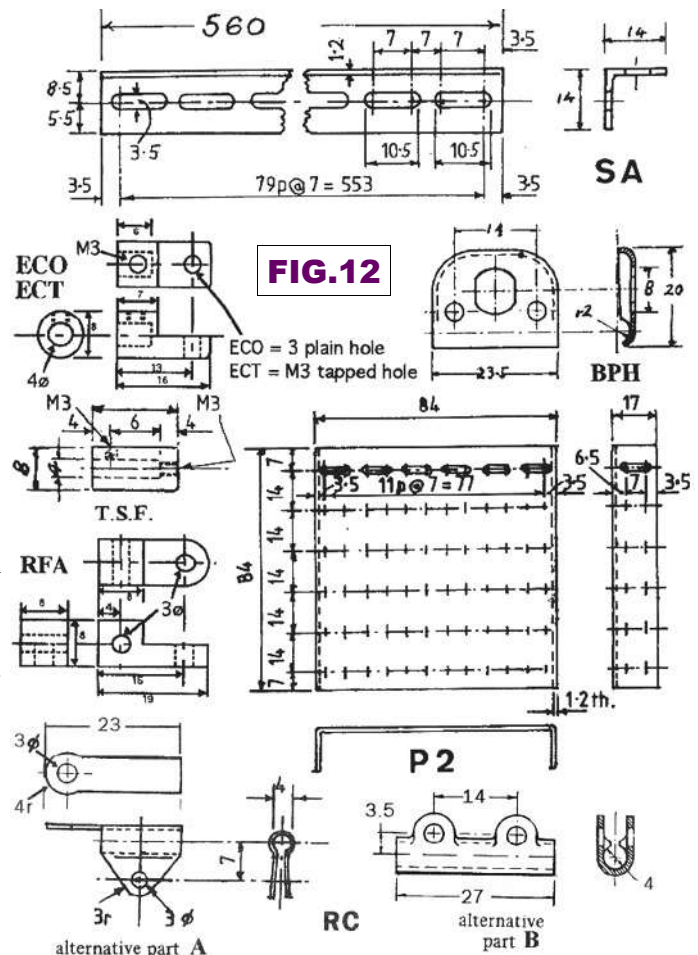
1995 or 1996 and a Manual, undated but before 1998, and possibly before the Catalogue. The sets and parts in them are very largely the same and any significant differences will be mentioned in what follows. A number of additional parts are listed compared with the 1969 range but it is understood that most, if not all, of these were added later in the Kingston era.

The sets listed are the Proto Standard Construction Kit (PCK 1 with over 2000 parts), the Medium Kit (PCK 2 with over 900 parts), the Basic Kit (PCK 3, over 70 [sic] parts), and the Project Kit (PCK 7). Each has parts for both structures and mechanisms; the PCK 7 is said to be ideal for student projects. The Catalogue also mentions specialised kits for education and training for: Mechanisms & Power Drive; a Two Speed Gear Box; and a Structural Kit. Kits PCK 1-3 have wooden boxes and the one for SCK 1, 607*223*166mm, matches the 3-layer Major box mentioned earlier. PCK 7 is in a plastic box with 15 removable compartments.

The contents of PCK 1-3 are listed in the Catalogue and the totals of the parts in the sets mostly don't agree with those in the Manual. For Sets 1-3 I made them 407, 349, & 295 plus 1460, 1140, & 630 NBW. The Manual has only the contents for the set in which it was included, PCK 1 in this case, with contents as in the Catalogue.

Comparing PCK 1 with the Kingston Major outfit, it has significantly fewer NBW and about three-quarters the number of the other parts, with noticeably fewer Spur Gears and the parts for use with the Rods. The new and redesigned parts though would add to the system's versatility and ease of use. And in making the comparison the PCK 1 cost about 6 times the Major but the cost of living had risen by 8 or 9 times between 1969 and 1996.

The new and modified parts (including those in the Kingston 'Later Material' list) are given below with the quantities of the new parts in blue brackets. Starred items are shown in Fig.12. The quantities of the earlier and modified parts were given previously in blue brackets.



- **A/G*** Now 560mm long with different slots.
- **Plate, Slotted.** Now has the same slot pattern as the A/G.
- **Plate, Flanged*** 84*84*17mm with rows of the standard slots across the face and flanges. {2; 2; 2}
- **Elbow Piece***. A pair of these (ECO/T), one with a plain & one with a tapped hole, replaced the Fork & Tongued Pieces.
- **Rod Socket*** (Threaded Sleeve, TSF). Brass. New design.
- **Spacer** Brass 4/6mm Ø, 1mm wide. {0; 20; 20}
- **Shafts** Now stainless as well as silver steel.
- **Coupling for 6mm Shafts.** A brass tube 6/9.5mm Ø & 19.7mm long with a single tapping near each end. {2; 2; 2}
- **Tube, Brass.** 4/6mm Ø, 560mm long. {0; 1; 1}
- **Helical Gears,** 14 & 21t, 14.4 & 16.4 [sic] pcd, steel, 6mm bore. {1/1; 1/1; 1/1}
- **Sleeve**, brass, 4/6mm Ø, 12mm long. {0; 4; 4}
- **Split Bush,** brass, 4/6mm, 12mm long. {4; 4; 8}
- **Bolts** Now with a pan or hex socket head, and zined or blackened respectively.
- **Geared Motor,** 12v D.C., 60rpm, 125mNm torque. Cylindrical, 34/39mm Ø, with a 39mm square mounting flange. 66mm long, plus the 4mm shaft. {0; 0; 1}

New Parts not in the PCK 1-3 Kits:

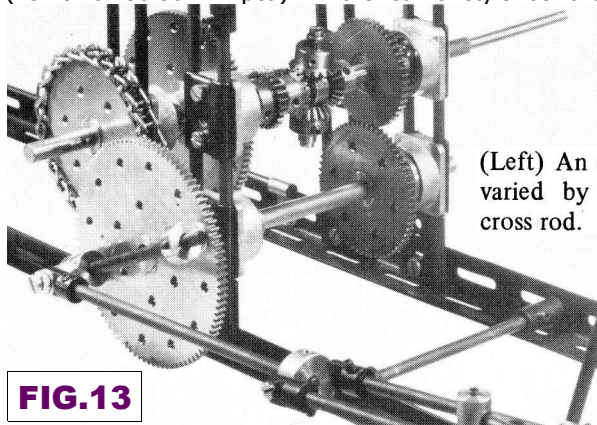
- **Rod Clamps*** 2 alternative designs.
- **Flat Connector***, RFA, brass
- **Holder for Plain Bearing***. BPH. For use in pairs when only one Rod is available. {0; 0; 1}
- **Sprockets for 4mm Chain.** Brass with 12 & 24 teeth (15.25 & 30.50mm pcd) in the same style as the other

Sprockets. 6mm bore.

- **4.0mm Roller Chain** and a **Connecting Link.**
- **Geared Motor.** Similar to the Kingston model but 125mm long. Not listed in the Catalogue.
- **Geared Motor,** synchronous, 240v, 20rpm, 50mNm torque. 'Crouzet' type, 48*66*32mm long o/a plus the 4mm Shaft. Not listed in the Catalogue.
- **Timing Pulleys,** 10,15,30,45,60,75t. 5mm pitch, pcd from 15.1 to 118.5mm. Bores 5 to 10mm, with 2 sizes of **Split Bushes** to allow use of the larger bore ones with 6mm Shafts.
- **Timing Belts,** 33-200 teeth, 165 to 1000mm long.
- **Oldham Couplings,** brass with Acetal Disc. 12.7 & 25.4 Ø, each with 4 or 6mm bores tapped 2x M3, M4 respectively, at 90°. 15.9 & 28.4 long o/a. The 12.7mm was also available with 5mm & ¼" bores, and the 25.4mm with ¾".

The Manual It has 20 punched looseleaf A4 sheets, many single-sided, including a title page (Fig.7), held inside a red plastic cover with a clear front. After the title page the pages are numbered 1-22, followed by 3 appendices. p1 lists the contents, pp2-3 has an intro including mention of the kits, and p4 has some hints on the use of the parts. The Illustrated Parts are on pp5-13 with the usual style of presentation, and pp14-22 has photos showing constructional details, with some new ones since the Kingston version. Then the appendices: 1) the quantities and layout of the parts in the PCK 1's box, 2) a table showing lengths of the 6.35mm Chain for various combinations of Sprockets & centre distances, and 3) centre distances for various combinations of Spur Gears.

The Illustrations that follow, Figs.13-17, are taken from the manuals described earlier. Notes about them are given in the 3 boxes amongst them.



(Left) An adjustable crank. The throw is varied by relocating the pivot on the cross rod.

FIG.13

The photos in the three manuals described here comprise a number which were meant to show the use of the parts; some showing the demonstration models made from the various kits of parts produced by the company; and a few finished models or mechanisms.

The earliest manual had only those relating to the use of the parts, some of which were carried forward into the later editions. Fig.13 is one example, though most were about frameworks, bearings, & gearing. The last manual had 2 larger, clearer photos which were not in the earlier ones.

Only 5 finished models/mechanisms were included, and the same photos were used in both the later manuals. 3 are shown here in Figs.14,16,17. cont. in panel on next page

A simulated shoulder and elbow mechanism to investigate methods of power transference. A motor drives through the shoulder to the elbow joint. Power is taken off this drive by magnetic clutches to rotate the upper arm about the shoulder. Developed at the Department of Mechanical Engineering, Queen Mary College.

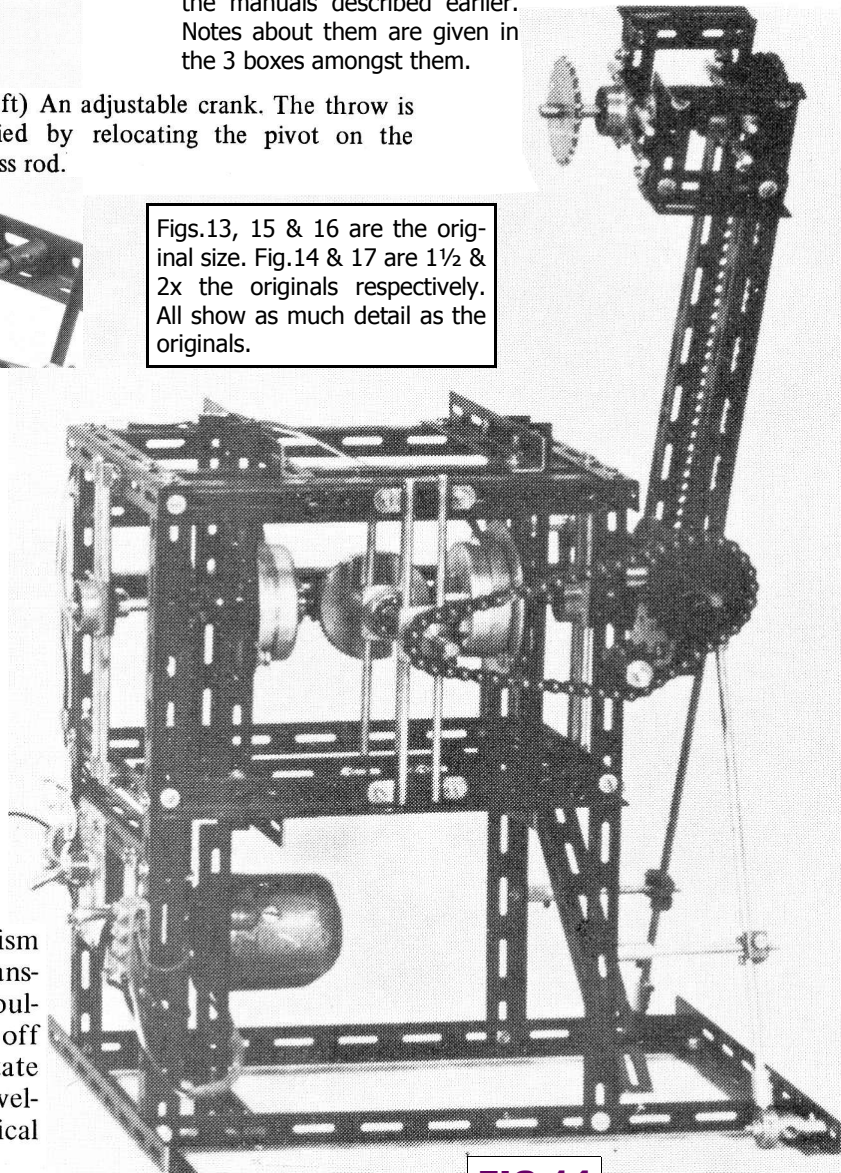


FIG.14

Figs.13, 15 & 16 are the original size. Fig.14 & 17 are 1½ & 2x the originals respectively. All show as much detail as the originals.

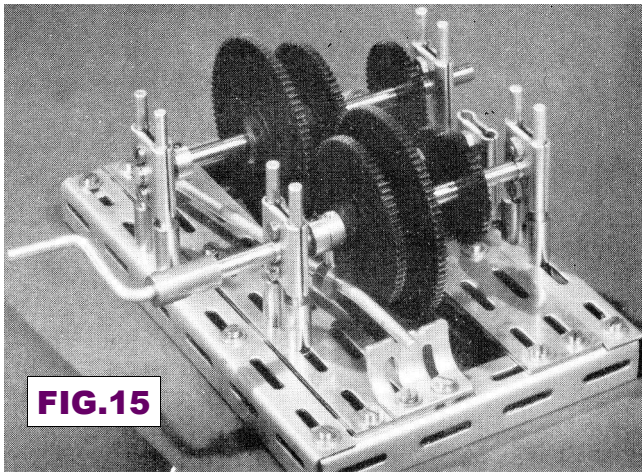


FIG.15

2-SPEED AND REVERSE GEAR

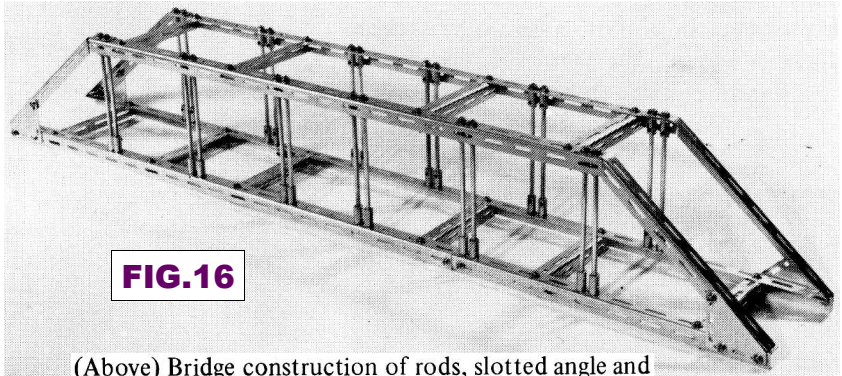


FIG.16

(Above) Bridge construction of rods, slotted angle and corner plates. Test loaded to 80 Kg.

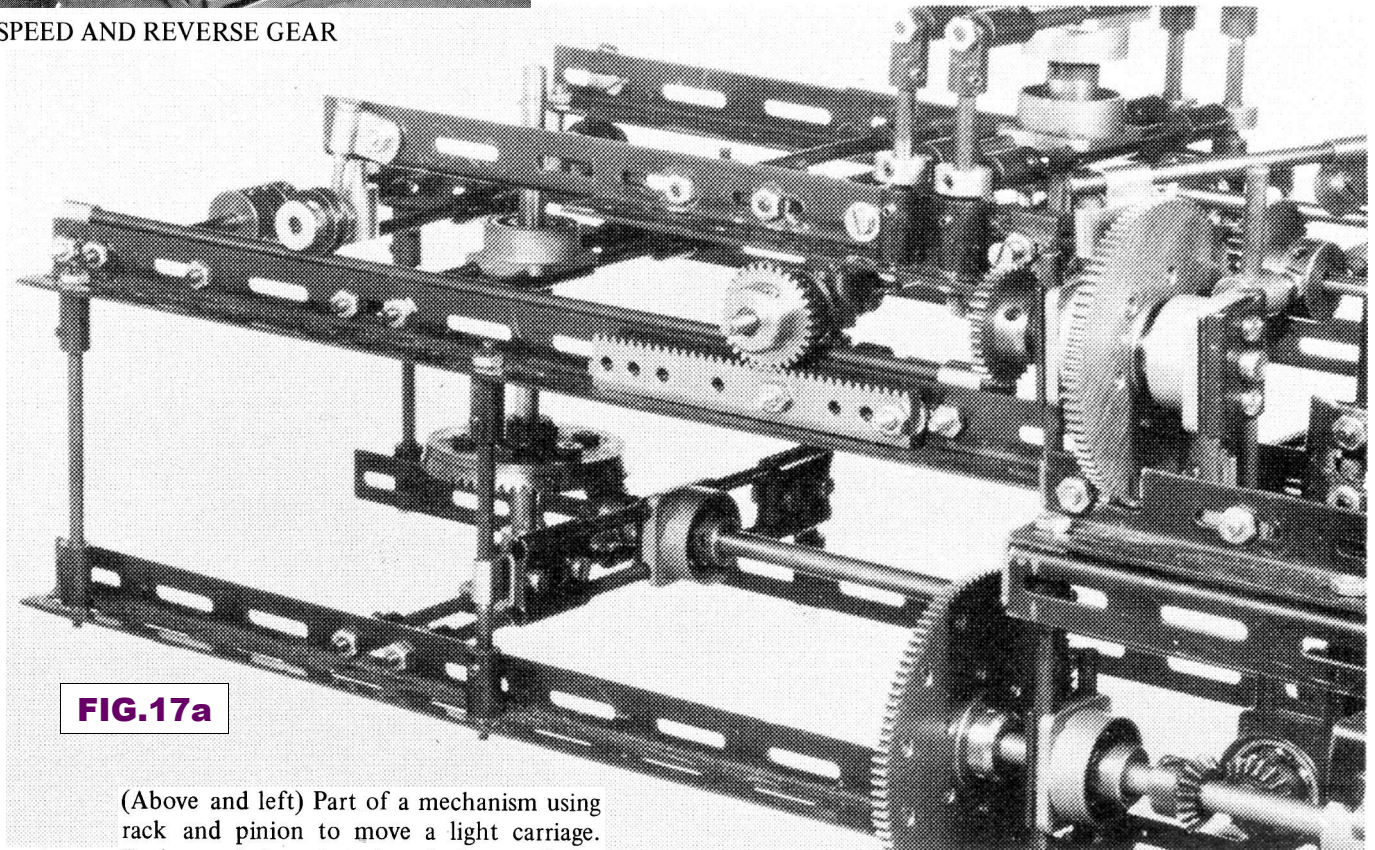


FIG.17a

(Above and left) Part of a mechanism using rack and pinion to move a light carriage. Rods coupled to slotted angle form rails for the pulley wheels.

One of the others was a simple Walking Machine designed by Professor M.W. Thring of Queen Mary College (University of London) and demonstrated on the B.B.C. television programme 'Tomorrow's World'. Shades of Frank Hornby sending a set to Professor Hele-Shaw perhaps. Likewise the fifth model, a Travelling Crane, said to be one of a number designed and constructed by students at the School of Engineering Science, University of Warwick, as a cost-design project. Unfortunately the photos are too poor to see any details of interest.

Fig.15 is one of the 5 demo models which were included in both the later manuals.

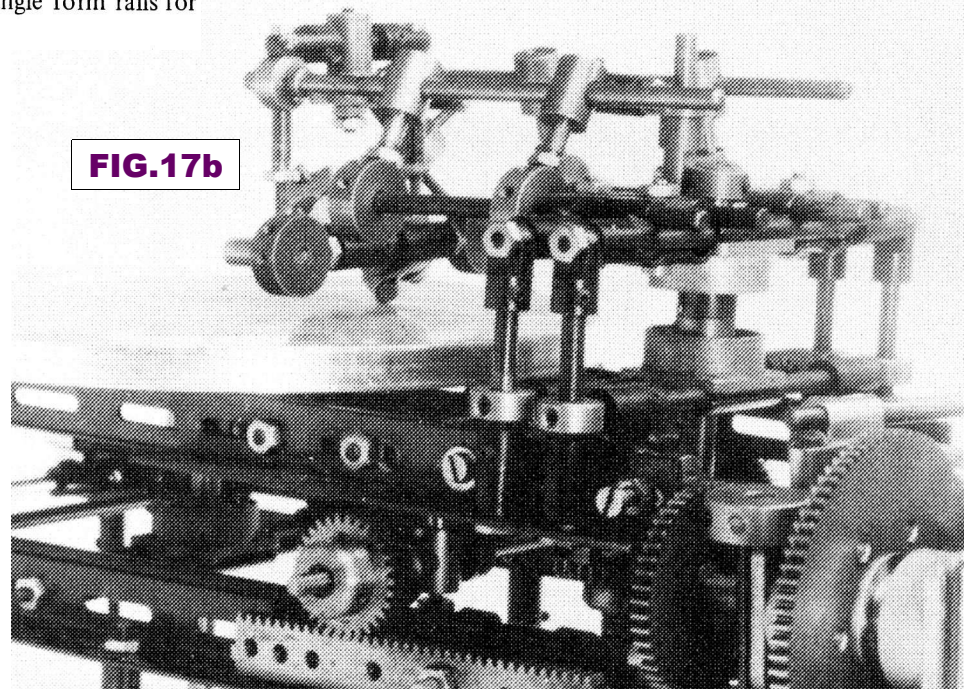


FIG.17b

KIKO and KITOU

by Jacques Pitrat

MODEL LEAFLETS

I have only two documents about these French systems: one leaflet headed 'KIKO N° 2' & another without a name. The first leaflet lists three KIKO sets and the models for them (see Fig.5): No.1 which builds model 2, a Car; No.2 which builds all the models on the leaflet; & No.3 which builds larger models such as a Crane, Plane, Merry-go-round, Travelling Crane, etc, none of which are shown.

Among the models in the second leaflet, there is a Crane, 2 Planes, & a Merry-go-round, and as many of the parts in the models are similar to those of the first leaflet, it is likely that it represents the models for Set 3, although there is no Travelling Crane. In MCS, the first leaflet is associated with KIKO and the second with KITOU.

THE SETS A box which has no markings on the lid contains the KIKO leaflet and is believed to be a KIKO set. From its contents (Fig.2) it is probably Set 2 since one can build all the models in the KIKO leaflet, but not most

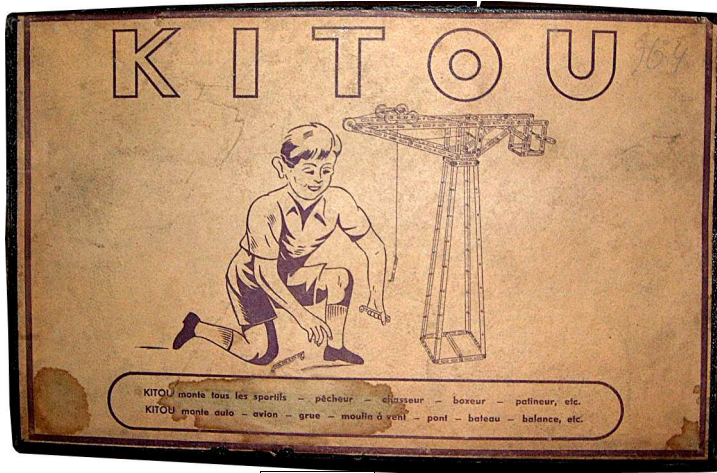


FIG.1

are shown in Fig.4. The KIKO parts are made in blackened steel. None are slotted, which is curious since all are shown slotted in the models in both leaflets. The steel KITOU parts are painted aluminium. Most of them are slotted, but some of the 2, 5, & 11h Strips, and the 1*5*1h DAS, and all the 1*9*1h DAS have only round holes. So, there were three periods. First KIKO with only round holes, and blackened steel Strips. Later, in the KITOU sets, the strips are painted, but at first have only round holes. Finally they have round & slotted holes, the length of the slots corresponding to 2 or 3 holes.

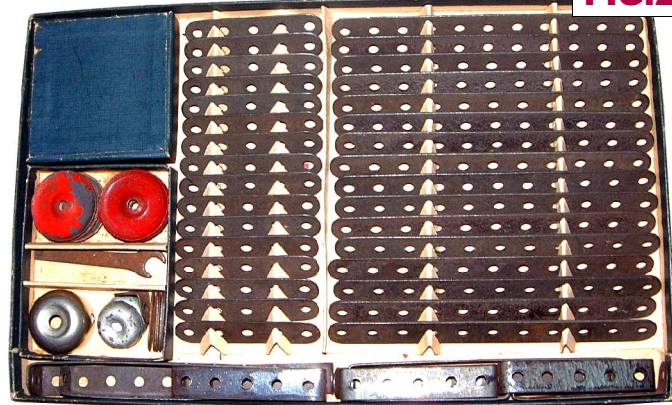


FIG.2

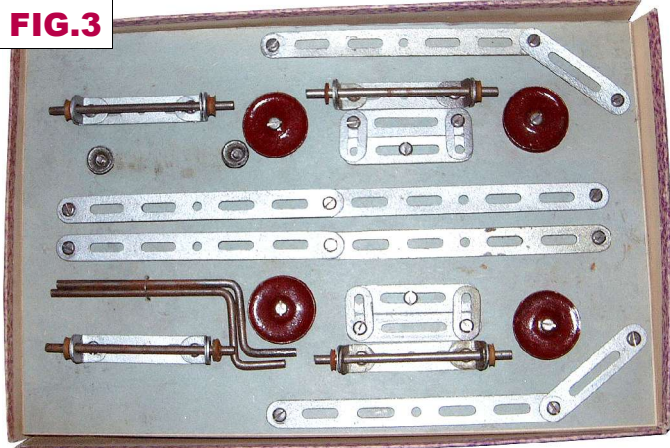


FIG.3

of those in the second leaflet.

I have also a lot of parts and boxes which include 3 KITOU boxes, & some parts from a fourth set. What is surprising is that they too contain the KIKO leaflet, & also two copies of the second leaflet. The parts, apart from, as explained later, the strip parts being pierced differently, are very largely similar to KIKO and can build the same models. So it seems probable that both KIKO & KITOU came from the same maker. Moreover the size (277*174*16mm) and inserts of the two larger, identical KITOU sets are the same as the KIKO set. Their small parts boxes too are identical, with plain lids covered by the same type of paper.

The KITOU sets have a boy building a Crane on their lid labels (Fig.1), with red printing instead of navy for the smaller set. The translation of the text on the lids is: 'KITOU builds all sportsmen, an angler, hunter, boxer, skater, etc | KITOU builds a car, plane, crane, windmill, bridge, boat, scale, etc.' Some of these models such as the Hunter and the Boxer are on the KIKO leaflet, and this adds to the probability that both systems are from the same maker.

There is no indication of the set number of any of the KITOU outfits but I assume that the larger ones are No.2 sets since they can build the models for the KIKO No.2 and not those of the second leaflet, which as already mentioned, probably corresponds to Set 3. The third of the KITOU boxes (Fig.3) contains few parts but can build the Car, so I believe that it is Set 1. Curiously enough, the box of this small (in

Notes on the parts, other than the strips parts in Fig.4, follow. • The **Angle Bracket** is a bent 2h Strip, so there is one form with two round holes and one slotted. • There are **7h Slotted Strips** in the KITOU lot, and as there is no room for them in the boxes, I assume that they belong to a KITOU No.3 set. They are used in several models of the second leaflet. • One kind of **5h long DAS** is the 7h Strip bent twice, but there is also a variety with all round holes, so no doubt



FIG.4

there was also a 7h Strip with round holes. • The **9h long DAS** (only in the loose parts) is made from the 11h Strip with round holes, and I have no example of the slotted type.

• Red **Pulley Disc**, diameter 31.5mm. In the KIKO set

pairs of discs are glued together to form Pulleys. • Threaded **Headlamps** for the Car (below the top left Axle in Fig.3). • 90mm **Axle**, diameter 4.0mm. 85 mm **Crank Handle**. (These parts appear only in Set 1). • Rubber **Collars**.

- Square **Nuts**, 7.0mm A/F, 2.2mm thick. **Bolts** with a pan head, length 10 mm. The N&B have the MECCANO thread.
- Combined **Spanner-Screwdriver**.

- A 65mm diameter **Tabbed Disc** (see Fig.4) as used in several of the second leaflet models. The 8 tabs are 1 hole long. Two examples were in the lot and as this part is too high to be put in the boxes, they probably belonged to a Set 3 whose box is missing.

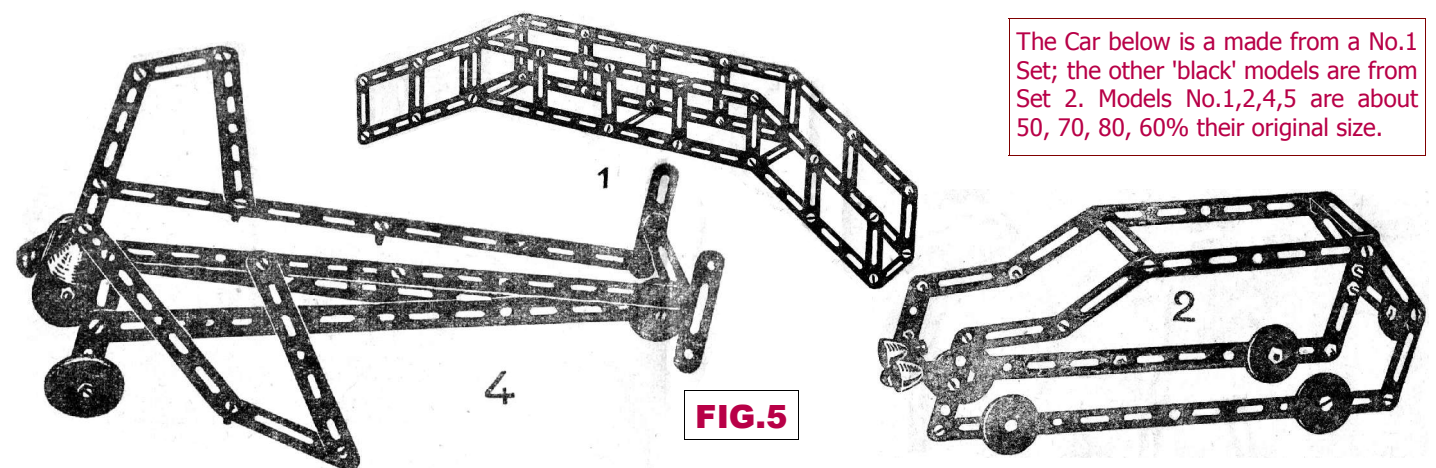
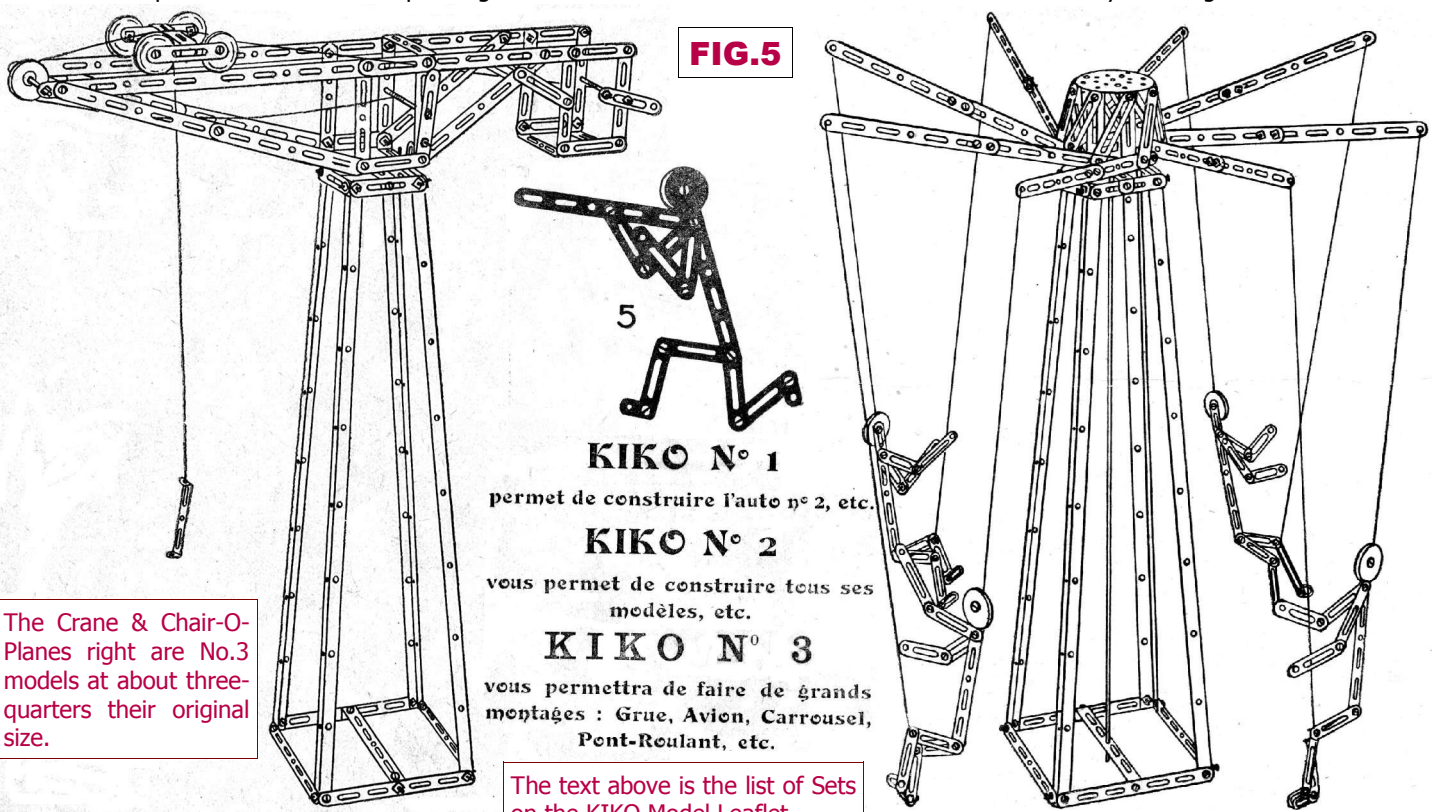
- An **Angle Girder** with 9 round holes on each side is used in most of the second leaflet models. The hole pitch is larger than for the Strips, probably about 1½". So, its length would be about the same as a 25h MECCANO A/G, There were none in the lot, and it would be too long for my boxes.

Returning to the KIKO No.2 set in Fig.2, the A/Bs & 2h Strips are in the compartment above the lefthand DAS. Also there are two circular parts whose purpose is not entirely clear. The smaller one might be an alternative form of the Headlight but it is larger and its centre hole is not tapped. The larger part has a short cylindrical body and could be the part used as the nose of the Aeroplane in Fig.5. As found neither of these circular parts were in the corresponding KITOU outfits.

THE MODELS The models below are the Car for Set.1, a Bridge, an Aeroplane, & the Hunter for Set.2, and a Crane & Chair-O-Planes for Set 3. Some of the constructional details of the Set 3 models are not clear including how the Pulley Discs & other part are held fast on Axles. Given that no Screwed Rods were found among the parts it seems that the parts must have been gripped on either side by a rubber Collar.

REMARKS The models of this simple system are not really very interesting. However, it lasted long enough to have three kinds of strips, and two names. It is a very rare system, I have never seen a KIKO set on eBay in ten years, and the KITOU lot was the first that I ever saw. It is curious to see the presumed KIKO box without any printed text, with parts which do not tally with the models, and another box whose parts agree with models, but which belong to a system with another name! It is likely that both systems were made by the same maker, who initially had difficulties in manufacturing the Strips, and began with a MECCANO pattern. And no doubt the change in the name of the system coincided with the new form of Strip.

There is no indication of the maker anywhere, but the KIKO leaflet has the printer's name on it, 'Imprimerie T. de Grandsaigne' in Thiers (a town in central France). No date is known but considering the parts, the models, and the picture on the KITOU lids, the 1930s, as given MCS for KIKO, is likely. Neither 'Kiko' nor 'Kitou' have any meaning in French.



THE CONSTRUCTIONNEER This was an American system launched soon after WW2; it was unusual in its range of parts & in having holes at $7/16$ " pitch. Some notes on the parts & manuals appeared in 9/206, with a little more on the parts in 26/779 & 29/845. The aim now is to complete the description of the manuals with the 1946 edition, and to describe what can be seen of the sets in the numerous Ebay photos which have accumulated over the years.

The MANUALS The copyright 1947 & 1948 editions were described in OSN 9 but to make it clear, the cover shown was the 1948 version; the 1947 was virtually the same but without the yellow oval bottom right – the words in it were printed in the bottom panel but with no price.

The 1946 edition had the completely different cover below, & 16 unnumbered



FIG.1

pages, 152*228mm, plus covers. p1 has an introduction which speaks of 'a ... set', & 'this set', with no mention anywhere of different sets, or set numbers. The main parts needed for the manual models, and as will be seen, the same parts in the only known 1946 set, correspond to those in what was later called Set No.6. 50 models are shown on pp2-13, from DUMP TRUCK to FLAT CAR. As later there is a line drawing of each model with the painted parts shown in solid blue or red. A number of the models, particularly the larger ones, were carried forward into the 1947 edition, but by no means all of them. p14 has the Illustrated Parts, and p15 is an order form for them. p16, C2, C3 are all blank, also C4 except for the maker's name & address, & 'Copyright 1946'.

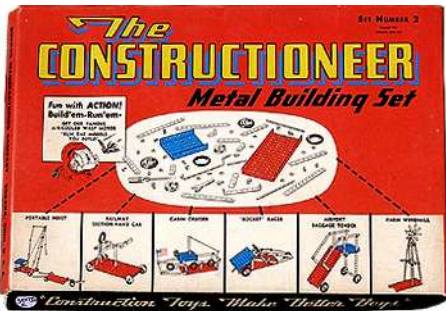


FIG.3 1948 Set 2 Lid & Parts

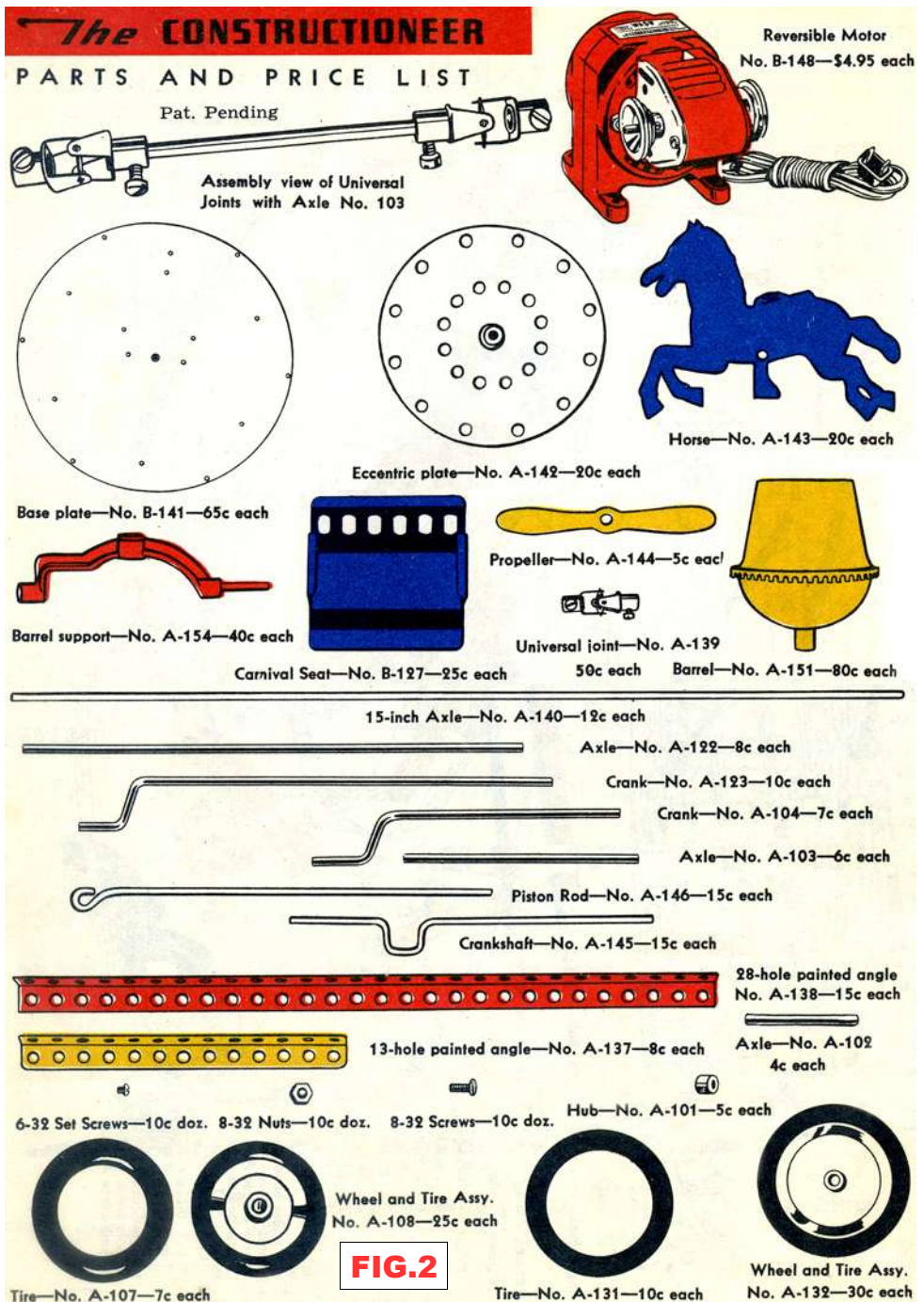


FIG.2

THE PARTS Figs.2 & 6, mainly taken from the 1948 manual, show all the parts in the system. **Finishes:** Strips, Wheels, & Brackets were nickelled. The zinc diecast 'barrel' parts #A-151-155 were often not painted. Virtually all the painted parts may be found in red, blue or yellow.

1946 There were just 21 parts as follows: 5,7,9,10,12,15h Strips; 3*2h A/B; 1*7*1h DAS; Flanged Plates: 2-bay Long Base, B-119, & 1-bay Short Base, B-118; 1 1/8" Ø Pulley & Rubber Ring; Short and Long Axles (1 3/4" & 4"), A-102, A-103, & Crank Handle; Collar; Set Screw, 6-32 x 3/16"; 8-32 Hex

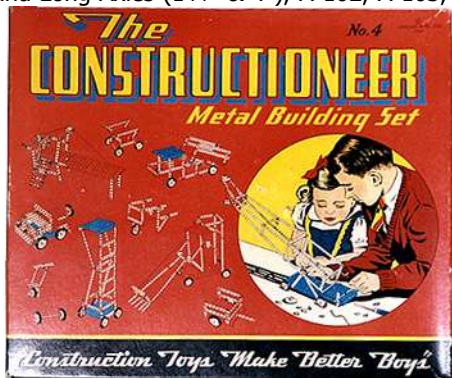


FIG.5 1947 Set 4 Lid

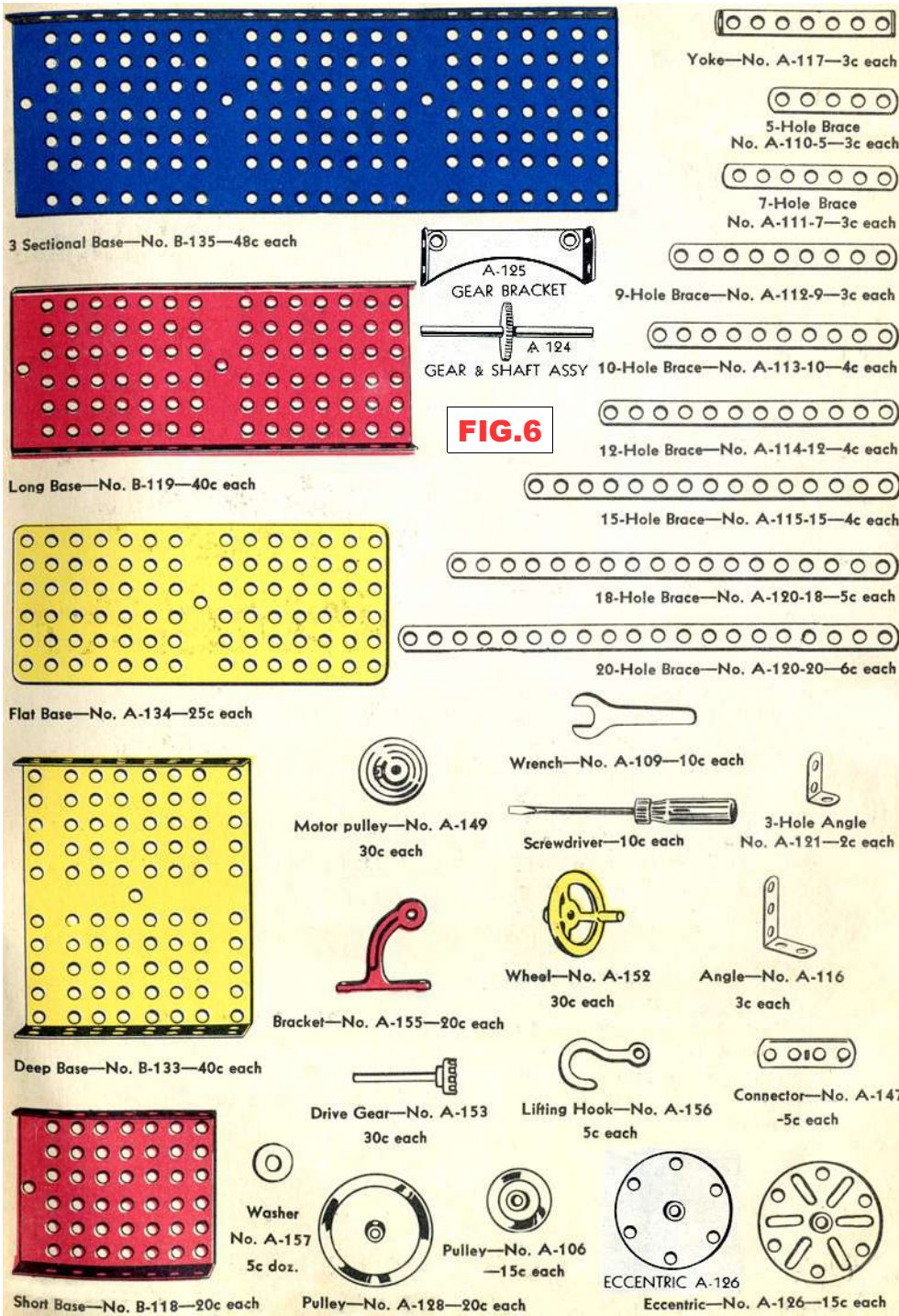


FIG.6

1948 The range now included the yellow 13.9" Ø Circular Base B-141 (with a 5/16" flange & a central boss); the red 3.9" Ø Circular Plate A-142; the Propeller; the 13 & 28h A/Gs; the Universal; the 15" Axle A-140; the Hook, and the zinc die-cast parts associated with the Barrel (A-151 to A-155, see Fig.13).

Two parts were modified: 1) slots were added to the Eccentric A-126; 2) the 3-bay Single Flanged Plate, B-135, was shortened to eliminate the single end hole & a lengthways stiffening groove was added between the outer two rows of holes.

THE SETS As already mentioned there were 3 manuals, © 1946, 1947 & 1948, and sets will be identified by which manual was with them.

As said earlier the 1946 manual covered only one unnumbered set. The 1947 edition covered Sets 4, 6, & 8, and the 1948 version added Sets 2 & 12. It has been said that sets were made after 1948 but if so the 1948 manual continued to be used.

Packaging Sets 2, 4, & 6 had cardboard boxes and each had a distinct lid design which remained unchanged. Examples are shown in Figs.3, 5 & 8, together with their open boxes. Sets 8 & 12 were in metal boxes, either red or blue, with a contrasting oval red or blue label. The parts were in a tray, on a card in the lid, & in the bottom of the box. Some details are shown in Figs.10-12 & 14-16, though the one or two other sets seen have some of the parts arranged slightly differently. The mixes of colours in the sets shown are typical but variations occur. A common one is the interchange of red & blue for the Flanged Plates.

1946

The only known set, see Figs.8 & 9, has a box 18*14*1 1/4". Printed in the bottom left corner of the lid, in tiny characters, is '© surrounded by 'URBANA MFG. CO.', with underneath what is probably '1945'. Most of the parts are clipped to the card.

1947

The lid of the **small parts box** which was black in 1946 is now blue.

The No.4 box is 15 1/2*13 1/2" and the lid (Fig.5) has 'No.4' top right. There may also be a copyright date top right. The parts are again clipped to a card (Fig.7).

Nut & 3/8" roundheaded Bolt; Spanner & Screwdriver.
1947 The parts now included all the Plates in Fig.6 and the other new parts were: 18 & 20h Strips; Carnival Seat B-127; longer Axle (7" A-122) & Crank Handle A-123; 1*2h A/B; 2" Ø Pulley A-128 & Tyre A-131 (those seen have circumferential ribbing). Also the (6-hole pattern) Eccentric Wheel A-126; the Motor, with unguarded reduction gearing, & the separate parts for it : A-124 & 125.

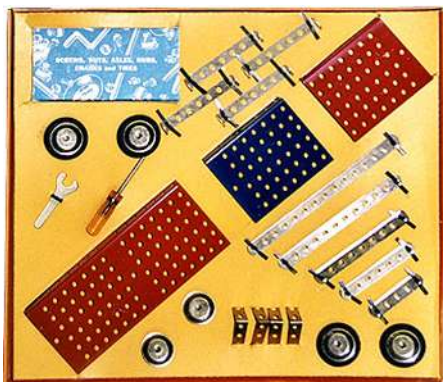


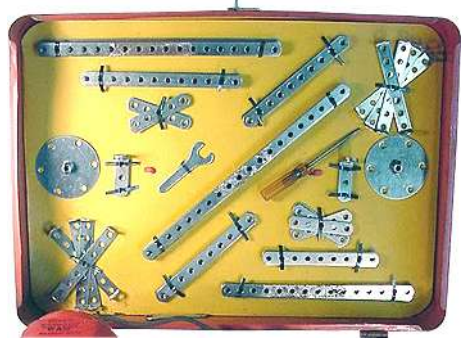
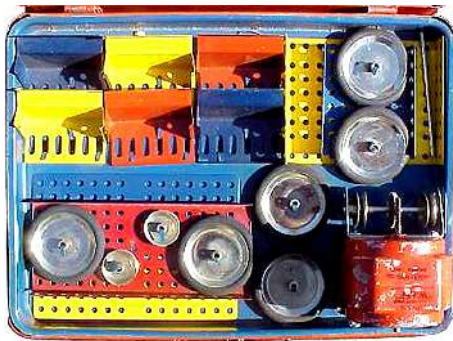
FIG.7 1947 Set 4 Parts



FIG.8 1946 Set 6 Lid & Parts



FIG.9



FIGS.10-12 1947 Set 8 Box, Tray & Lid Card

the small parts box and, under it, the Motor. The

In some sets all 6 Pulleys are fitted with a Rubber Ring.

The No.6 Its lid is as Fig.8 but with 'No.6' in tiny letters top right. The contents were as in 1946 but on a yellow backing card.

The No.8 Its metal box was red, 14*10" (Fig.10). Inside the parts

other parts were held by pressed through tags. The Universals were at either end of a 4" Axle mounted alongside one of the Long Bases in place of the 2 Pulleys, the latter deleted or in the small parts box.

Later the Motor & the cutout in the base for it were removed and an oval label was stuck on to fill the space. At the same time 4 yellow 11h A/G's were added with 2 in a 'V' (as in the No.4) of top of each of the Long Bases.

None of the manual models show the C/W Motor, and none of those for the No.6 need the Universals, except that for one Crane it was suggested that the model could be powered by the Wasp Motor using them.

The No.8 Its metal box was now blue with a red oval label, and inside the metal tray was red. No 13h A/Gs can be seen in any of the sets seen but 4 are needed for some of the No.6 manual models. In one set the small parts are in a plain brown envelope rather than the usual blue box.

The No.12 has a similar metal box to the No.8 but red and at 14*18*4", larger. Most of the parts can be seen in the figures below. Again there is a cutout in the tray for the Motor, near the centre of one long edge.

A No.12 model is shown below and 2 others in Figs.18 & 19, all at their original size.

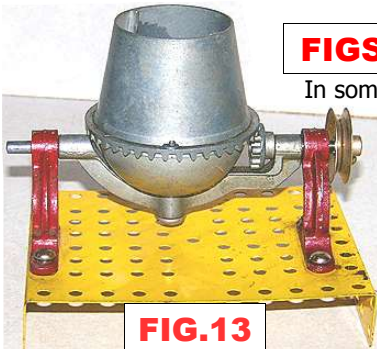


FIG.13

were either clipped to a card in the lid (Fig.12), tagged to a blue metal tray with a cutout for the Motor (Fig.11), or sat in the bottom of the box (not shown – the photos to hand show a jumble of Plates, Strips, etc.)

1948

The No.2 lid (Fig.3) has 'Set Number 2 | Copyright 1947 | URBANA MFG. CO.' top right. The models shown on it were all in the 1948 Manual.

The No.4 remained unchanged except that 2x 11h A/G's were added in 'V' formation on the Long Base, and in one set the backing card looks red.

The No.6 was changed by the addition of a C/W Motor (see 9/206) & 2 Universals. The backing card was replaced by a yellow pressed steel base with cutouts for



FIGS.14-16 1948 Set 12 Base, Tray & Lid Card

SUGGESTIONS FOR SET No. 12

TRACTOR & POWER TAKE OFF

- 2 - 28-hole angles A-138
- 1 - motor
- 3 - flat bases
- 2 - 4" axles
- 2 - 7" axles
- 1 - 1 3/4" axle
- 4 - large wheels
- 6 - small wheels
- 2 - hangers from cement mixer
- 7 - 5-hole angles
- 8 - 3-hole angles
- 4 - 7-hole braces A-111-7
- 3 - 12-hole braces A-114-12
- 2 - 10-hole braces A-113-10
- 1 - cement mixer
- 10 - hubs
- 1 - hoke
- 2 - eccentrics
- 50 - screws
- 50 - nuts

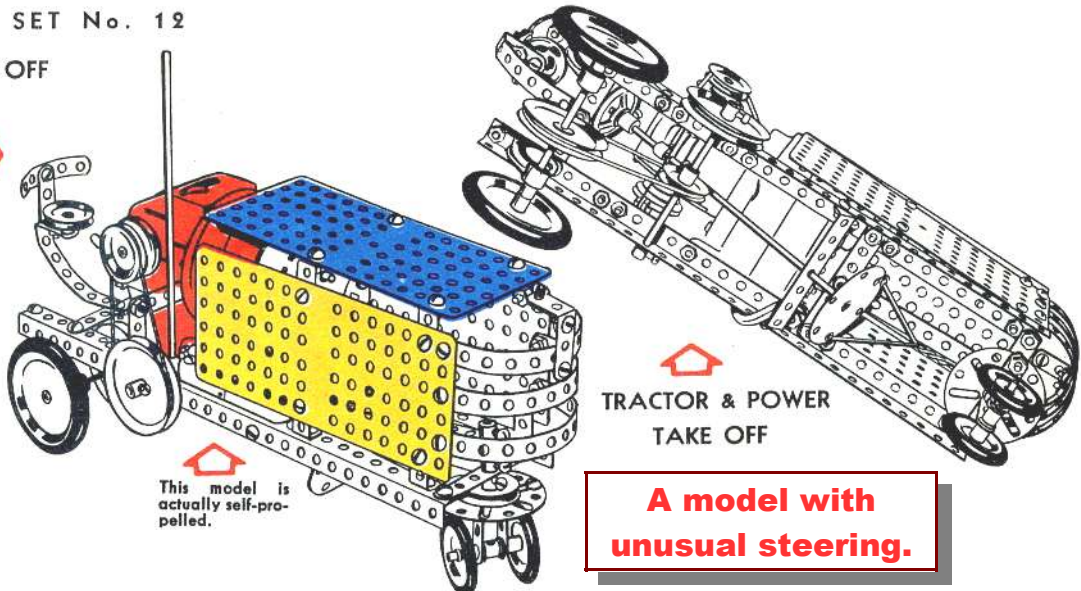


FIG.17

This model is actually self-propelled.

TRACTOR & POWER TAKE OFF

A model with unusual steering.

POSTSCRIPT There is no official list of the contents of any of the T C sets and though the main parts can be seen in the smaller outfits, Sets 8 & 12 are a problem. But in discussion with Jacques Pitrat he mentioned that he has a No.12, probably the one shown in Figs.14-16, which has unused parts still in their original position, and seems complete. He kindly offered to compile a list of the parts in it, as follows (R B Y denotes red, blue, & yellow):

10x A-101 Hub; 1x A-102 Axle 1 3/4"; 5x A-103 Axle 4"; 1x 104 Crank (short); 8x A-106 Pulley (small); 6x A-107 Tire; 1x A-109 Wrench; 10x A-110 5h Brace; 10x A-111 7h Brace; 6x A-112 9h Brace; 10x A-113 10h Brace; 10x A-114 12h Brace; 12x A-115 15h Brace; 16x A-116 Angle; 10x A-117 Yoke; 16x A-120-18 18h Brace; 16x A-120-20 20h Brace; 15x A-121 3-Hole Angle; 4x A-122 Axle 7"; 1x A-123 Crank (long); 4x A-126 Eccentric; 6x A-128 Pulley (large); 6x A-131 Tire (large); 2B+2Y A-134 Flat Base; 0x A-137 13h Angle; 4R+4Y A-138 28h Angle; 6x A-139 Universal joint; 1x A-140 15-inch Axle; 1R A-142 Eccentric plate; 2B+2R+2Y A-143 Horse; 1B+1R+1Y A-144 Propeller; 6x A-145 Crankshaft; 6x A-146 Piston Rod; 12x A-147 Strip Connector; 2x A-149 Motor Pulley; 1x A-151 Barrel (not painted); 1Y A-152 Steering Wheel; 1x A-153 Drive Gear; 1x A-154 Barrel support (not painted); 2R A-155 Bracket; 1x A-156 Lifting Hook; 14x A-157 Washer; 1B B-118 Short Base; 1R B-119 Long Base; 3B+3R+2Y B-127 Carnival Seat; 2Y B-133 Deep Base; 2B+2R B-135 3 Sect-ional Base; 1Y B-141 Base plate; 1x B-148 Rev-ersible Motor; 42x 6-32 Set Screws; 140x 8-32 Nuts; 144x 8-32 Screws; 4x 8-32 Screw long; 2x Large Screw for the Barrel; 1 Screwdriver. [Question: why was the prefix 'B' used for a few of the part numbers?]

Notes from Jacques. • The blue tray is used as a very large base for the Merry-Go-Round. • Two parts were not listed in the manual: Long 8-32 Screw with

15mm of thread instead of 8; and Large Screw for the Barrel. It is 6.0mm Ø & 8mm long and is used in the threaded hole at the bottom of the Barrel, to fasten it to its Support in the Tractor Trailer Cement Mixer (below). 2 were found in the Set but only one is needed. • Of the 6 Universal Joints found only 3 are used in any of the models. • The parts lists for one or two of the models call for more parts than were found in the Set but as far as can be seen these are errors. • There are other errors with too few parts listed in some cases, and some incorrect part numbers. • Curiously, as in the No.8, there were no 13h Angles in the Set although 4 are needed for one model, the Draw Bridge. As many of the Set 6 models use them, but none of the No.8, perhaps this part was only in the No.6, and the Draw Bridge was a mistake. 13h Angles would have been helpful in many Set 8 & 12 models though, and if they were not in those sets it also means that the progressive nature of the system was lost in 1948. There is perhaps a hint of this in the manuals because in the 1947 edition the No.6 models are headed 'For Sets Nos. 6 or 8' whereas in 1948 the heading was simply 'For Set No.6'.

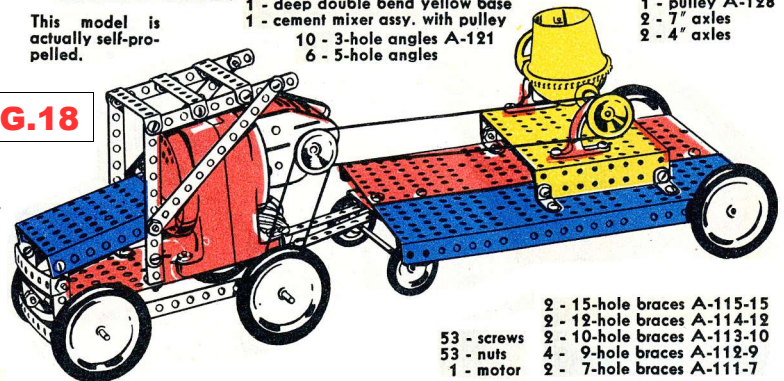
TRACTOR TRAILER CEMENT MIXER

This model is actually self-propelled.

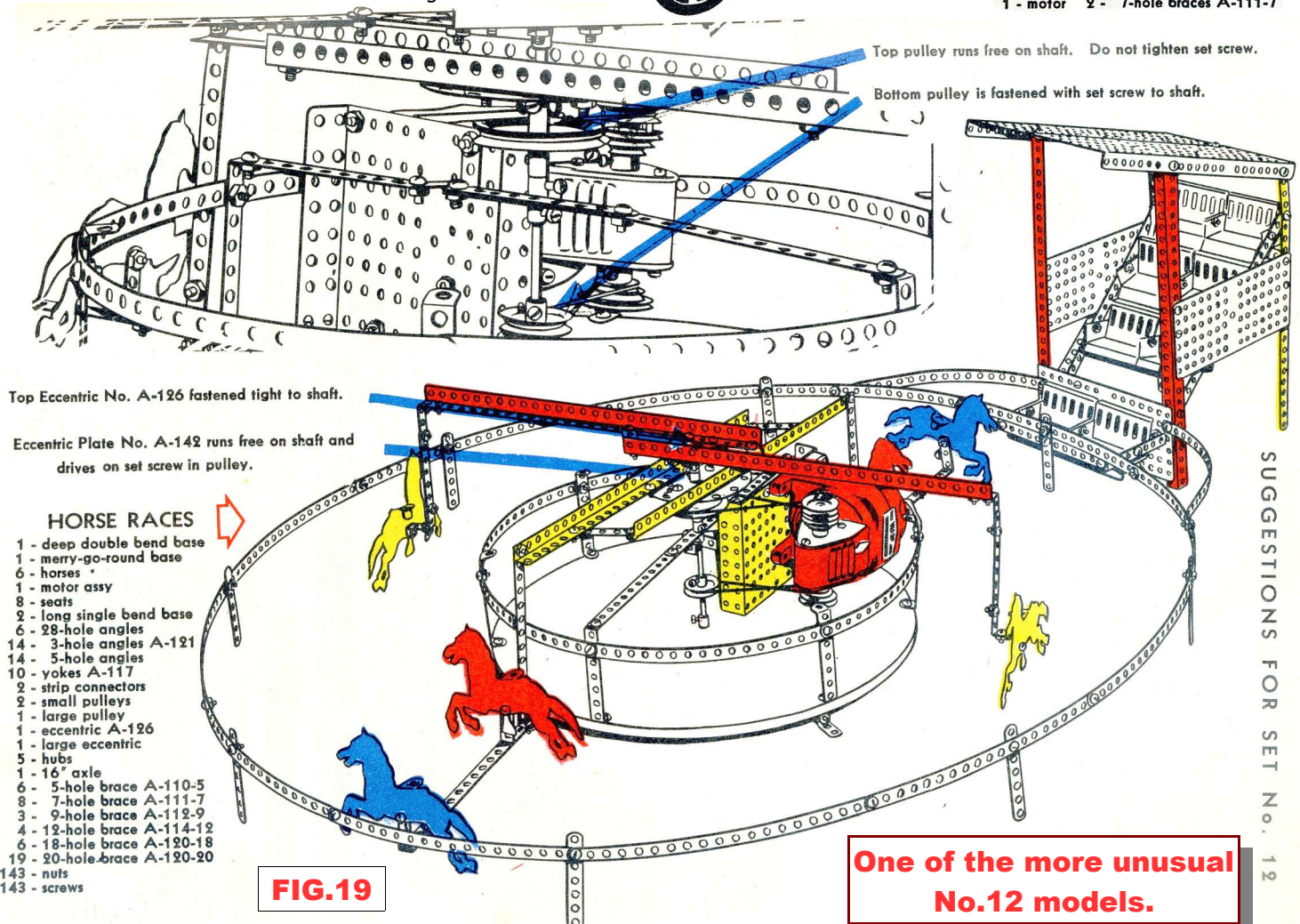
- 2 - long red single bend base
- 1 - short blue double bend base
- 1 - blue flat base
- 1 - deep double bend yellow base
- 1 - cement mixer assy. with pulley
- 10 - 3-hole angles A-121
- 6 - 5-hole angles

- 7 - yokes A-117
- 6 - large wheels
- 2 - small wheels
- 1 - pulley A-128
- 2 - 7" axles
- 2 - 4" axles

FIG.18



- 2 - 15-hole braces A-115-15
- 2 - 12-hole braces A-114-12
- 2 - 10-hole braces A-113-10
- 4 - 9-hole braces A-112-9
- 1 - motor
- 53 - screws
- 53 - nuts



Top Eccentric No. A-126 fastened tight to shaft.
Eccentric Plate No. A-142 runs free on shaft and drives on set screw in pulley.

Top pulley runs free on shaft. Do not tighten set screw.
Bottom pulley is fastened with set screw to shaft.

HORSE RACES

- 1 - deep double bend base
- 1 - merry-go-round base
- 6 - horses
- 1 - motor assy
- 8 - seats
- 2 - long single bend base
- 6 - 28-hole angles
- 14 - 3-hole angles A-121
- 14 - 5-hole angles
- 10 - yokes A-117
- 2 - strip connectors
- 2 - small pulleys
- 1 - large pulley
- 1 - eccentric A-126
- 1 - large eccentric
- 5 - hubs
- 1 - 16" axle
- 6 - 5-hole brace A-110-5
- 8 - 7-hole brace A-111-7
- 3 - 9-hole brace A-112-9
- 4 - 12-hole brace A-114-12
- 6 - 18-hole brace A-120-18
- 19 - 20-hole brace A-120-20
- 143 - nuts
- 143 - screws

FIG.19

One of the more unusual No.12 models.

SUGGESTIONS FOR SET No. 12

Snippets. More on AUTO-CONSTRUCTOR Two lots have recently been seen on Ebay and they add to the notes in 40/1216. The first consisted of 4 sets; the second a large number of loose parts.

THE 4 SETS The first has a lid identical to Fig.3 in OSN 40, that's to say the smaller size of the basic outfit, with Nr.1 on the one example seen of its lid apron. The lids of the other sets are shown in Figs,1-3, all roughly to the same scale, and in the original photos their set numbers can just about be seen as, from the left, Nr.2, Nr.3, & Nr.4. None of the sets are complete and some of the parts have ended up in the wrong box.

The 'Nr.1' has the same partitioning as the OSN 40 set and the parts in it are mainly as would be expected. The METALLO TRIGON (M T) Screwdriver described in OSN 40 can be seen in the small part box (Fig.4), and also there, a 6-spoke diecast wheel, perhaps the part used as a Steering Wheel. It might be the M T 32mm Pulley, though if so it is a little larger than would be ideal. Parts probably not from the Set are (a) an Angle Plate with a rightangle bend in it which could be part of the seats on top on the OSN 40, Fig.8, 'Double-Decker' Bus; (b) 2 of the M T 10cm long DAS that were in the smaller OSN 40 'mystery' set, use still unknown; and (c) 2 of the 5h, 5cm long M T DAS #8, which might be for use as the interplane struts on the Nr.3 Biplane. A manual in the Lot has the same cover as Fig.5 in OSN 40, & one of the loose model sheets in it, not seen previously, is for the Double-Decker Bus.

The Nr.2 base matches the larger of the two 'mystery' sets in OSN 40. It scales at about the size given there, and has the same partitioning. Apart from some Brackets & a Plate from the Nr.1, the parts include a number needed for the Fire Engine on the lid: a Chassis Side Member as used for the stiles of the ladder, 12 of the M T DAS for its rungs, 4 Buckets, and what may be the Hose reel Ends (Fig.5)

Presumably this set should have all the parts needed, over and above those in the Nr.1, for the 'Nr.1 u. 2' models. Some would be more of the Panels already in the Nr.1, and of the 'specials' one of the seat parts for the Bus has already been mentioned. But there is no sign of the parts needed for the ladder on the back of the Bus.

The Nr.3 base (Fig.6) is the smaller of the 'mystery' bases in OSN 40; again it scales at the size given there & has the same partition-

ing. It is no doubt another add-on set to allow at least the Biplane on the lid to be made. The wooden Propeller, as in OSN 40, would seem to be genuine. The 5cm DAS is, as noted already, a possible Biplane part, & the 4 shorter DAS, together with those in the Nr.2, make up the 16 needed for the Fire Engine ladder. Could the yellow part top right be the Biplane's Cabin Roof? And what of the 'Stop' & 'Go' Signs to its left? I'm told that school buses in certain countries are fitted with Stop/Go signs of some sort for use when the bus is stationary. Fig.7 is the cover of the Nr.3 manual, the other manual in the Lot.

The Nr.4, Fig.8, contains a clockwork Motor which is presumably intended to fit into the floor of the chassis. The short winding shaft can just be seen near the centre of the sideplate. There is nothing to indicate how the the wheels would be held to the output shafts.

THE LOOSE PARTS A large unbalanced selection, with mainly Body Panels including no less than 8 Bonnets. 2 parts not seen before are shown in Fig.9. One, the black strip, could be a Stile from the ladder on the Bus though its hole spacing differs from that in OSN 40 (Fig.8). The second is the black Curved Ended Plate, use unknown. The parts are in 4 colours, the known red, blue, & black, plus yellow. The latter were all Body Panels, including a Bonnet, and a few of them can be seen in Fig.9. Also in the Lot a number of red Strips & DAS with irregularly spaced holes, or no holes at all in the case of the 2 short parts in Fig.9. Possibly these were DIY parts & I then wondered if the yellow parts had been home painted, but against this, there were some yellow parts in the Nr.3 set.

HISTORY On Ebay the Sets were said to be by Heinrich Fischer, c1920, one of the 3 firms mentioned in OSN 40. Evidence for this can be seen in Fig.10, the bottom of the Set 4 box, which has a pattern including the company's fish logo (Fig.11). I still wonder though about the METALLO TRIGON parts and so don't rule out the possibility of the Stanzwerke or Curt Schrader companies in Eisenach being connected with AUTO-CONSTRUCTOR. Also the Fischer firm was in Nürnberg and that's quite a long way from the Philipp Kühner company in Eisenach, possibly a printer, whose logo, shown in OSN 40 (Fig.1), was taken from one of a manual described there.



FIG.1



FIG.2



FIG.3



FIG.4



FIG.5



FIG.6



FIG.7

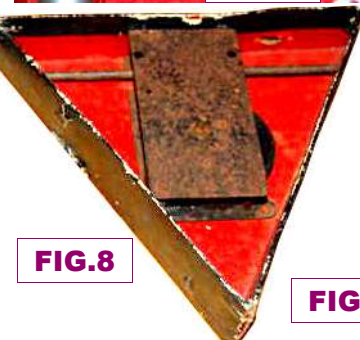


FIG.8



FIG.9

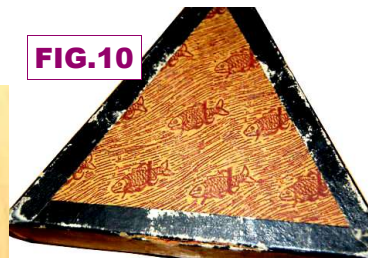


FIG.10



FIG.11