

NEW FACTS - NECOBO Thanks to Harry Mariën it has been possible to examine 4 NECOBO manuals, summaries of which are included opposite. These together with 2 NECOBO price lists of sets and parts from Geoff Wright allow some amplification of the data in MCS.

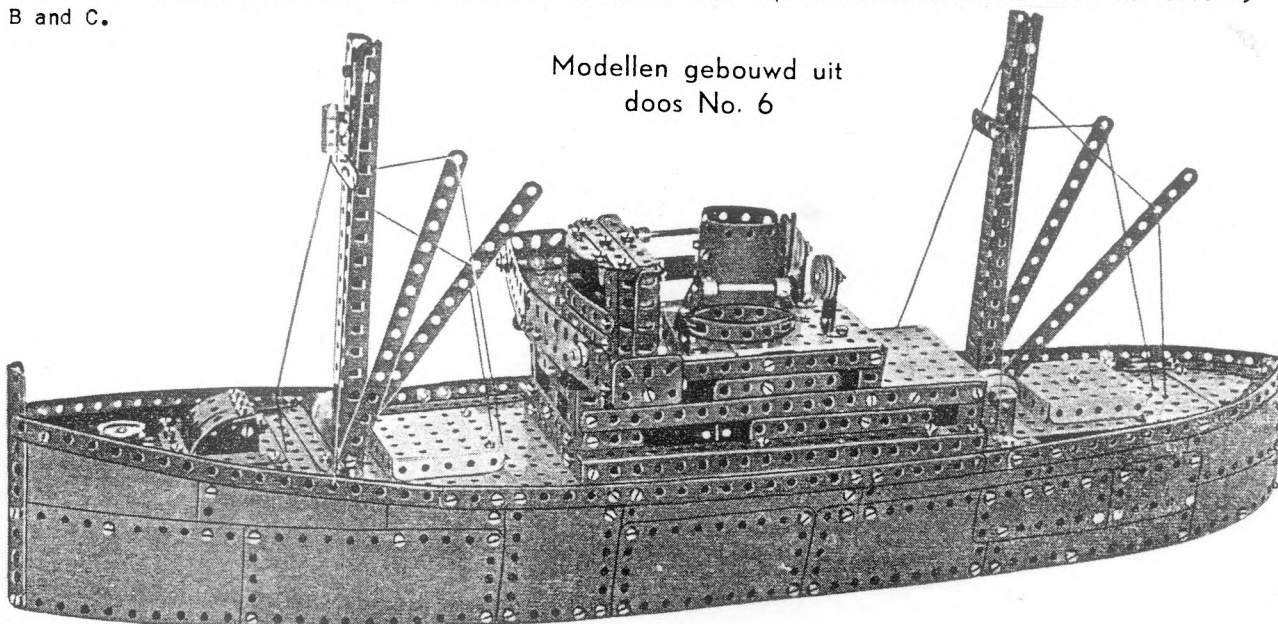
One price list has no date and the other is dated Sept 1961, they both show identical parts and sets except that the dated one lists a Junior set, smaller than Set 0. There are no dates on any of the manuals but, from the changes to the ranges of parts and contents of sets that are shown in them, it is possible to make a good guess as to their chronological order, and the summaries are so listed. The information in MCS seems to fit in all respects between the second and third manuals, that is the 0-4 and the 3-4. From its appearance the earliest manual might be from the 1950's and the last from the 60's. The latter shows the same range of sets as the price lists (apart from the Junior set) but the set contents section of the manual contains far fewer parts than the lists. This could mean that there were in fact fewer parts in the system at the time of the manual in question, but this is very probably not the case because the Set Contents sections of two of the manuals list only the parts needed for the largest set then available.

The dated price list is reproduced overleaf at slightly reduced scale and it shows that by 1961 the standard range of sets had increased to the Junior plus 0-6 (from 0-4 in MCS), and in addition there are sets A, B and C. The parts shown, over 200 of them, far exceed those in MCS, and they form quite a comprehensive system with a reasonable selection of gears and sprockets but with no large circular parts. There are though quite a number of variations on MECCANO parts and quite a few of MARKLIN origin. It also appears from the undated list that the manufacturer had changed to Bé & Bé, unless this was the distributor (quote "een Kwaliteitsproduct van Bé & Bé, Industrie en Handelsonderneming, Strijkviertel 30, DE MEERN. - Tel. (03406) 2025").

Returning to the manuals (and with the assumed date order) it is stated in the Introduction to the earliest that the range of sets was 0-3 and the Part Numbers in the Set Contents section contain none with a letter after the number except those for Axle Rods. With the exception of PN's 75-79 and 85 and 86, all numbers through 94 are used although many are not needed to define the contents of the sets. So this may have been the complete list of parts at that time. Among those listed, but not used in Sets 0-3, are a few which are not in the Price Lists. They are Flat Girders 3, 15, 19, 25 holes long (PN's 12, 19, 20, 21), and DAS with 2x5x2 and 3x5x3 holes (PN's 39,40). Compared with MCS the contents of Set 3 lacked the parts 85 and 86 as well as 118, 119 and 125.

Generally the contents of sets did not vary very greatly during the period under review. The most significant changes, apart from the parts 85 to 125 mentioned above which first appear in the second manual, were the inclusion of a Flanged Plate in Set 0, this being first shown in the MCS data, and the introduction, in the last manual, of Rubber Rings for the 2.5 cm Pulleys in all the sets instead of only in Set 4. Otherwise changes were confined to a few extra Nuts and Bolts, Washers, Axles and the like, as time went on. Obviously the most important changes were the introduction of Sets 5 and 6, and A, B and C. These are first mentioned in the last, 0-2, manual: in the Introduction, Sets 0-5 are mentioned and after the illustrations of the models for Sets 0-2 there are pictures of sample models from Sets 3, 4, 5 and 6; on the rear cover Sets A, B and C are advertised, but not illustrated, and 3 models shown - all are mechanisms using gears. Unfortunately the Set Contents section of this manual only covers Sets 0-2. There is no evidence that there were any gears in Sets 5 and 6, no doubt this aspect was catered for with the sets A, B and C.

Modellen gebouwd uit
doos No. 6



The models shown in the manuals stayed the same throughout except that additional models for Sets 0 and 1 were introduced in the last (0-2) manual, making use of the Flanged Plate that had been added to Set 0 and the Rubber Rings as tyres. These new models, as well as many models throughout the range, had quite a good appearance except that the larger vehicles made from Sets below No 4 lacked suitably sized wheels, a fault in the models from the smaller sets of many systems. None of the models were shown motorised and there was no mention of a motor in any of the literature described.

Finally MCS gives the colour of the parts as green for Strips and red for Plates; this is borne out by the coloured covers of the manuals except that Flexible Plates are shown there as being blue.

SUMMARY OF MANUALS

Name:	NECOBO	NECOBO	NECOBO	NECOBO
Details of maker:	NEderlandse COstructie BOuw, d.w.z.	NEderlandse COstructie BOuw, d.w.z.	None	NEderlandse COstructie BOuw, d.w.z.
Dates or Ref Nos:	<----- All have DRUKKERIJ VAN LONKHUYZEN ZEIST on back cover ----->			
Page size:	237x152mm deep	237x148mm deep	240x165mm deep	240x171mm deep
No of pages:	40 unnumbered	48 unnumbered	20 unnumbered	48 (3-46 numbered)
Language:	<----- Including covers -----> plus covers.			
Printing:	Dutch	Dutch	Dutch	Dutch
Page nos & of Parts List:	*1 *2	*1 *2	*1 *3	*1 *4
Highest PN of Set Contents:	*5 *6	*5	*5	*5 *6
Sets covered:	38, 39. (94)	44, 45 (125)	18, 19 (125)	47, 48 (125)
No of models for each set:	0-3	0-4	3-4	0-2
Name, model no, page no of first and last model of each set:	8, 21, 17, 11 *7	8, 21, 17, 11, 6 *8	11, 6 *9	27, 45, 17 *10

Other notes: The manuals are listed in what is believed to be chronological order.

*1 All models are shown in halftone.

*2 Front cover, below left, is in halftone. The crane is predominantly red and green and the letters of NECOBO are red, green, red, gold, green, gold respectively. The industrial skyline is purple with a light brown foreground and a blueish sky above.

*3 See below centre. As *2 except for contents of parallelogram, top right.

*4 Front cover, below right, is in fine halftone. The background is green at the bottom, changing to yellow, with the industrial skyline above in dark blue. The sky is blue with a white cloud; the boy is wearing a blue jumper and the crane is mostly green. The letters of NECOBO are red and under the righthand end is METAAL BOUWDOZEN in small black capitals.

*5 A description with some illustrations, of the parts used in the sets is included in the Set Contents section.

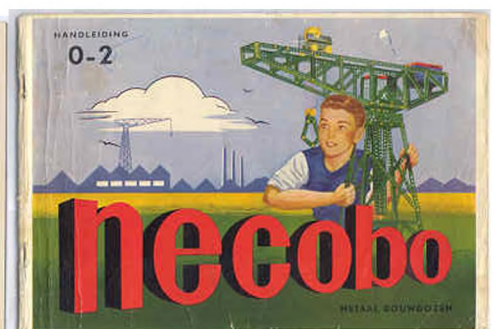
*6 Some other parts, not used in the sets described in the manual, are also included.

*7 0: Weegschaal, 1, p5; Schommel, 8, p8. 1: Bewaakte Overweg, 9, p9; Draaimolen, 29, p19. 2: Mijnlocomotief, 30, p20; Hijskraan, 46, p28. 3: Draaimolen, 47, p28; Hijskraan, 57, p37. NB. Model numbers only appear in the complete list of models on p4.

*8 As *7 but add - 4: Haven-Portaalkraan, 58, p38; Veetransportauto, 63, p43.

*9 3: Draaimolen, p2; Hijskraan, p11. 4: Haven-Portaalkraan, p12; Veetransportauto, p17. NB. There are no model numbers.

*10 0: Hijskraan, 1, p3; Autoped, 27, p11. 1: Bewaakte Overweg, 1, p12; Rivierkruiser, 45, p34. 2: Mijx-Loocomotief, 1, p35; Hijskraan, 17, p42. NB. Sample models from Sets 3, 4, 5 are shown on pp43-46; 3 models from Sets A, B, C appear on the back cover.



Bestel No.	ONDERDEEL	Prijs	Bestel No.	ONDERDEEL	Prijs
72	Brugstuk 4 cm	0.25	97	Brugleuning 9 cm	0.32
73	Brugstuk 1 1/2 cm	0.30	98	Brugleuning 1 1/2 cm	0.38
74A	Assen 2 1/2 cm	0.05	98A	Brugleuning 14 cm	0.45
74B	Assen 4 cm	0.05	99	Sectorplaat 10 cm	0.75
74C	Assen 5 cm	0.06	100A	Voorbeeldenboekje junior	0.35
74D	Assen 6 cm	0.08	100B	Voorbeeldenboekje no. 0-2	1.40
74E	Assen 7 1/2 cm	0.10	100C	Voorbeeldenboekje no. 3-4	1.40
74F	Assen 9 cm	0.10	101	Aanvullingsboekje no. 5-6	1.40
74G	Assen 10 cm	0.12	104A	Handl. v. aandr. A.B.C.	0.75
74H	Assen 11 1/2 cm	0.14			
74I	Assen 13 1/2 cm	0.16			
74K	Assen 16 1/2 cm	0.18			
74L	Assen 20 cm	0.20			
74M	Assen 29 cm	0.20			
80	Schijf 4 cm	0.25	106	Verbindingsstrip 3 cm	0.12
81	4 cm met naaf	0.60	107	Verbindingsstrip 4 1/2 cm	0.15
82	Schijf 6 cm	0.40	108	Verbindingsstrip 6 cm	0.18
83	6 cm met naaf	0.70	109	Vlakstrip 8 cm	0.14
84	Halve schijf	0.35	109A	Gleufstrip 11 1/2 cm	0.20
85	Snaarschijf 13 mm	0.32	109B	Gleufstrip 11 1/2 cm	0.20
86	Snaarschijf met naaf 16 mm	0.55	110	Cirkelboogstrip 8 cm	0.16
87	Loopwiel 2 1/2 cm	0.25	111	Enkele kruk 4 cm	0.40
88	2 1/2 cm met naaf	0.50	112	Dubbele kruk 4 cm	0.40
88A	6 cm met naaf	0.75	113	U-strip 4 cm met naaf	0.46
88B	Rubberband voor no. 87	0.26	114	U-strip 1 1/2 cm met naaf	0.40
88C	Autoband voor no. 88A	0.90			
89	Krukas	0.18			
90	Kraanhaak	0.06			
91	Schroevdraaier	0.40			
92	Bout 6 mm met moer	0.05			
92A	Bout 16 mm met moer	0.07			
92E	Ringen (24 stuks)	0.24			
93	Steischroef	0.04	118	Stelling	0.28
94	Veerclips	0.02	119	Askoppelbus	1.10
			119A	Aseindkoppeling met moer	0.65
95	Boegstrip	0.18			
96	Propeller met naaf	0.50	120	Schetsplaat	0.15

* worden met steischroef geleverd.

Bestel No.	ONDERDEEL	Prijs	Bestel No.	ONDERDEEL	Prijs
121	Schetsplaat	0.18	176	Kegelriemschijf 19/25/32 diam.	2.60
122	Schetsplaat	0.15			
123	Schetsplaat	0.18	177	Scharnier	0.26
124	Kruk met naaf	0.60			
125	Moersleutel	0.22	180	Excentriek slag 6 1/2 mm	1.50
126	Raam	0.45	185	Klauwkoppeling 2-delig	1.00
132	Con. tandwiel 20 tanden	1.40	186	Draadstangeindkoppeling	0.35
135	Transm.-spiraal 16 cm	0.32	187	Draadstangekoppeling	1.10
136	Transm.-spiraal 20 cm	0.40	188	Schroefdraadpin met moer	0.35
140	Spoorkraanswiel	0.95	189	Tuimelaar	0.20
145	Rondsel 19 tand, br. 6 mm	0.70	190	Tuimelaar met naaf	0.48
146	19 tand, br. 12 1/2 mm	0.90	195A	Draadstangen 2 1/2 cm	0.15
147	19 tand, br. 19 mm	1.15	195B	Draadstangen 4 cm	0.15
148	25 tand, br. 6 mm	1.00	195C	Draadstangen 5 cm	0.16
149	25 tand, br. 12 1/2 mm	1.25	195D	Draadstangen 6 cm	0.20
150	25 tand, br. 19 mm	1.50	195E	Draadstangen 7 1/2 cm	0.22
151	Tandwiel, 50 tanden	0.95	195F	Draadstangen 9 cm	0.45
152	Tandwiel, 57 tanden	1.00	195G	Draadstangen 10 cm	0.55
153	Tandwiel, 95 tanden	1.20	195H	Draadstangen 11 1/2 cm	0.70
160	Kroonwiel, 25 tanden	0.70	195I	Draadstangen 13 1/2 cm	0.80
161	Kroonwiel, 50 tanden	1.00	195L	Draadstangen 16 1/2 cm	0.95
165	Worm	0.85	195M	Draadstangen 29 cm	1.10
166	Wormwiel, 38 tanden 6 mm	1.90	200	Transmissieketting 1 meter	1.10
170	Pal met naaf	0.15	201	Kettingwielen 14 tanden, 19 mm diam.	0.55
171	Pal met naaf	0.30	202	Kettingwielen 18 tanden, 25 mm diam.	0.60
172	Draibout met 2 moeren	0.20	203	Kettingwielen 28 tanden, 38 mm diam.	0.65
173	Pal met naaf in draibout	0.50	204	Kettingwielen 36 tanden, 50 mm diam.	1.00
174	Trekveer	0.24	205	Kettingwielen 56 tanden, 75 mm diam.	1.40
175	Palwiel	0.95	215	Scharnierplaten 4 x 6 cm	0.90
			210	Scharnierplaten 6 x 6 cm	1.00
			211	Scharnierplaten 6 x 11 1/2 cm	1.25
			212	Deurscharnieren 4 x 6 cm	0.80
			215	Deurscharnieren 6 x 6 cm	0.95
			216	Deurscharnieren 6 x 11 1/2 cm	1.15

* worden met steischroef geleverd.

'MODEL BRIDGE' SET Thanks to Brian Rowe the Editor is now the proud owner of the box lid and most of the parts of this little set. The lid measures $13\frac{1}{8} \times 6\frac{1}{2}$ " and its outside and the label on the underside are shown opposite at reduced scale. Its date is not known but it is said, judging by the artwork, that it is most likely to be around WW1. Its interest is twofold, first the parts are similar to MECCANO but with only the holes in them needed to assemble the bridge, and secondly the lid has a small label stuck on it, only half of which remains (see enlargement opposite), but it might have read MANUFACTURED BY LICENSE UNDER MECCANO PATENTS.

The parts consist of a black metallic finished $5\frac{1}{2} \times 2\frac{1}{2}$ " Double Flanged Plate with only 4 holes in it, one at each end of each flange; $5\frac{1}{2}$ " Strips with 6 holes at 1" spacing; $5\frac{1}{2}$ " Strips with just the end holes; 2" Strips with only the first and third holes; and $2\frac{1}{2}$ " DAS with only a hole in each lug. The bridge shown on the lid makes the 2" Strips look more like $2\frac{1}{2}$ " long with the centre and end holes missing, but otherwise the illustration is a fair representation of the parts. All the Strips are nickel plated and the ends are semi-radiused; they are accurately made with no sharp edges and apart from the missing holes could easily be thought to be of MECCANO origin, and certainly early 2" Strips usually had semi-radiused ends and examples of $5\frac{1}{2}$ " ones with that type of end are known. The Flanged Plate has the same dimensions as the MECCANO one but is of thinner gauge steel (.021") and there are one or two slightly sharp edges on it. The DAS are exactly the same width as the Flanged Plate and so fall towards the middle of the 3 widths of DAS given in DMS, but don't correspond exactly with any of them. None of the original nuts and bolts were with the surviving parts of the set.

So was this a MECCANO product, put out anonymously, perhaps to increase turnover by tapping into the cheap end of the market, rather like BRITISH MODEL BUILDER in the 1930's. Or was it to see how popular more realistic models with no superfluous holes might be. In either case why the label, well possibly a late thought to make any other manufacturer who might think of copying the idea, aware that patents might be infringed by doing so. But against this the toys advertised on the lower half of the inside of the lid look as if they were made of wood and this must make the MECCANO connection less likely.

So perhaps it was a question of another manufacturer having a bright idea and thinking that since the whole point of MECCANO was the equispaced holes, there would be no patent violation in producing parts with only the holes in them needed for assembly. And in principle this must surely be true, otherwise anything, or at least any toy, made of metal and bolted together would have been in trouble. But of course our hypothetical manufacturer chose to make his parts look very like MECCANO ones, with the holes spaced so that they would line up with MECCANO holes, and no doubt that could have led, by whatever route, to the label being attached, perhaps not until after the sets had gone on sale and Hornby had got to hear of it.

Neither theory sounds altogether convincing but whatever the explanation, since this is the only example of one of these sets that has turned up, it isn't very likely that they were popular enough to make anyone's fortune. From the point of view of dating this set does anyone know when the relevant MECCANO patent(s) expired. UK patents normally last for 16 years but in some circumstances they can be extended.

The other parallel sets advertised on the lid may have needed some different parts from those in the Bridge Set, longer Strips perhaps for the Crane. News of any parts that might fit the bill would be welcome, as incidentally would the following Strips - 5 of 2" with 2 holes and one of $5\frac{1}{2}$ " with 2 holes. These are the ones missing from the set and with them I could make the bridge entirely from original parts.

NECOBO GEARS Since OSN 4 appeared I have realised that FB's latest version of MCS contains a NECOBO Illustrated Parts List which looks earlier than the one in OSN 4, for one thing it ends at PN 140 and also the Manuals listed go only to Set 5. The interesting thing though is that it contains 5 gears which are not in the list in OSN 4 (but none, of course, of those in OSN 4 after PN 140). The five are Gears PNs 127, 128 and 129 with 16, 35 and 60 teeth respectively, and Nos 130, 130A - Worm Wheel (38 teeth) and Worm. If the 16 and 35 tooth wheels mesh at 1" centres as is likely the corresponding DP is 25.5 and for the 16 and 60 at 3 holes, 25.3. And for these DPs the equivalent Module is 1.0. So it seems that the original NECOBO gears were relatively coarse and as might be expected for a Continental system conformed to a particular Module rather than a DP. At some stage there was a change to the OSN 4 gears which are almost certainly compatible with MECCANO. If the Worm Wheel had the same pitch as the Gears it would have a diameter of about $\frac{3}{4}$ " and in the MCS illustration it looks larger than that if anything, but even $\frac{3}{4}$ " would mean a very small Worm for a mesh at $\frac{1}{2}$ " centres. Unfortunately the Worm isn't illustrated.

BET YOU DIDN'T KNOW THAT - MERKUR. MERKUR 10-hole Braced Girders are to be found with either male ends or with female ends. The MCS entry (MERKUR (C). 3/4c) which comes from the older style small format manual, shows the latter, and so does my similar manual; the other sort appear in the newer large format ones. And its not just in the manuals, I have some of each sort, but unfortunately I didn't notice until I had mixed up for ever those from a new and those from an older set.

NECOBO MOD 1 GEARS. In OSN 5/85 I suggested that the original NECOBO gears were Mod 1. Hans Klarenbeek recently kindly gave me a handful of gears which turned out to be Mod 1 and which fitted more or less exactly the description of NECOBO gears #127-130A in MCS(FB), p3/4. That's to say they have the same number of teeth, and there are no holes in the faces of the gearwheels. The only difference is that the Worm Wheel in MCS looks like a proper one with the teeth shaped to conform to the Worm whereas the one I have is just like the other gearwheels except for the number of teeth. The Worm and Worm Wheel mesh at 2-hole centres and not the 1-hole spacing that I postulated in OSN 5. I've typed 1-hole and 2-hole advisably because the only problem in saying these gears are almost certainly early NECOBO is that suitably paired they bind rather if mounted at centres that are multiples of $\frac{1}{2}$ ". They run sweetly when spaced x 12.9mm apart. I haven't myself any NECOBO parts to check their hole spacing but MCS says $\frac{1}{2}$ "; it also says that the hole diameter is 4.5mm and if that is correct it would mean that MECCANO diameter axles (4.1mm) would be a loose fit, and this might just allow the gears a reasonable mesh. All five gears are brass throughout; the bosses have an o/d of 10.0mm, a bore of 4.1 (they just fit a MECCANO axle), and they are double-tapped 5/32 BSW; the o/d of the Worm is 14.0mm and the face width of the Pinion is 5.3mm.

CONSTRUCTION C40 Control System

Hellmuth Kohler

The last two issues of OSN have given brief details of this set which contains a programmable sequential controller; here is a fuller description. The heart is the programme unit, as illustrated in OSN 6/133. This has groups of electrical inputs, outputs and a programming board area.

What does this quite complicated system do? It controls a sequence of up to ten 'states' or steps. Each step is initiated by a momentary contact closure - and maintained until the next impulse is received. At each step, zero, +4.5 or -4.5 volts is provided at each of two independent output sockets, a third output socket gives only zero or +4.5 v. Motors or lights or other 4.5 v devices can be driven from the outputs. Reset, that is a return to the first step in the sequence, is automatic after ten steps, or can be programmed earlier at any stage. There is no inbuilt timing element, contrary to the claims in the original German publicity.

OUTPUTS and PLUGBOARD. Output channels are at the top of the unit. A1 and A2 each have two pairs of pins, 1 & 2 together with 3 & 4. A3 has just pins 1 & 2. On channels A1 & A2, pins 1 & 4 are connected always to 4.5 v, on channel A3 pin 1 is also at 4.5 v. Jumper plugs, which can be inserted for each step (row) of the controller, determine the output states at the pins when the program row is active. The controlled pins of the output channels A1 and A2 are 2 & 3, on A3 pin 2 only.

With no jumper plug, pins are not live. Either pin 2 OR 3 can be made active by inserting a jumper. With the jumper to the left, pin 2 is at 9.0 v (U_b); with jumper to the right, pin 3 is at 0 v (\perp). Inserting two jumpers in channel A1 or A2, which would appear to switch on both pins 2 and 3, is not allowed, and might (will?) damage the unit.

Single pole devices, lights, etc. are connected to pins 1 & 2 and/or 3 & 4 as desired, and can be switched on or off. Channels A1 and A2 can drive 4.5 v d.c. motors in either direction, by taking pin 1 (or 4) to one motor terminal, and commoning pins 2 & 3 to the other. The system output connecting plugs do this for you. As pins 1 and 4 are at 4.5 v, 2 at 9 v or 3 at 0 v, the motor 'sees' + or - 4.5 v.

CONTROLLING the SEQUENCE. The active row (or step) in the program is shown by a lit LED. At the top left of the controller is the input area. There are 4 input pins 'S' (all with similar function, but not just in parallel to give one input), (\perp) are two ground pins, and at R are two reset pins. Every time an 'S' pin is grounded, the control steps along one row. This input need only be a transient contact. The system protects against contact bounce by requiring about a two second interval before any further input signal is accepted.

On applying + 9.0 v to an 'R' pin the sequence resets to step (row) 1 immediately. This 9.0 v can be obtained direct on the board from the first pin in a row, with no jumper in place, as shown in the model picture. Note that this 9.0 v only appears when the program row is active.

The jumpers are not simply connectors, they contain diodes to prevent unwanted current flows.

[cont. >]

Corrections • The page numbering of OSN 23 should read 23/xxx instead of 22/xxx. • In the MCS Database 2000, the 'SM' in 'Codes C' on p44 should read 'SH'.

ITEMS FROM LETTERS

1. From Don Redmond. • John Wapshott recently found a **CASTLE BUILDER** box (22*11½*2½") with no set number on it, and the bulk of the contents turned out to be most of a **STRUCTOMODE** No.6 Set. No manual or other 'paper' was with it. Characteristic STRUCTOMODE parts found included the Windmill Sails with large round holes, Braced Girders with semicircular cutouts, & a Little Hustler motor. Also present were Flanged Plates, whereas CASTLE BUILDER had Perforated Plates & A/Gs instead. The two Propeller Blades of the No.6 were found but they are 'sickle' shaped (as sketched left, ½-full-size) instead of the broad, early MECCANO type shown in STRUCTOMODE manuals. The parts nicely filled the compartments in the box, with the Motor fitting into a full-depth section, and raised level packaging in the other sections.

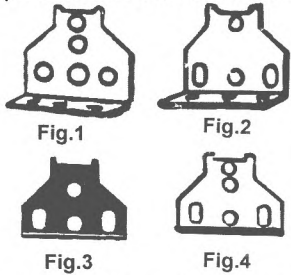


As noted in 16/458, CASTLE BUILDER was made in Toronto by the Castle Mfg. Co., probably from 1917 to 1918/19. Canadian Toys Ltd. of Hamilton, the makers of STRUCTOMODE, were listed in the Hamilton directory for 1921-22 (after that the manager, R.H.White, appeared until 1925). Is it possible that Canadian Toys acquired and made use of some CASTLE BUILDER boxes?

Points of interest concerning the (supposed) STRUCTOMODE parts found are: • ½" & ¾" Loose Pulleys made of tin discs eyeleted together; • the early MECCANO pattern Pawl is made of ordinary not spring steel, and is nickel plated; • the 5*11h Flanged Plate is as shown in the manual with the flange holes near the bend; • the Motor is as the manual but without the wooden base. (The type was illustrated in 19/551 with 'KNAPP' on the base.)

No Trunnions (see 23/681) were in the box.

• The 1924 **ERECTOR Car Truck** had the top hole raised compared to the STEEL ENGINEERING pattern (see 23/666), and then in 1926 the original hole was restored giving 2 holes at the top. [Referring to *Greenberg*, this last pattern was shown in the Illustrated parts (Fig.1) for 1924-



26, and then changed to Fig.2 in 1927 (with a single hole at the top and the side holes elongated). In 1928 & 1929 the Fig.3 type is shown, and no later illustrations are provided. But these changes may not represent the (whole) truth of the matter because where the Car Truck can be seen in the

photos of sets, it is the Fig.2 type in 1924, 1928, 1929, & 1933 (all in nickel). It is said that the extra hole was added in 1935 (Fig.4) and this part, painted red, is shown in a 1935 outfit and in later sets. *Greenberg* also has a photo of a set, said to be a 1920 No.1, which clearly shows 4 of the Fig.3 parts. Said part isn't listed in the 1920 Parts List or Set Contents, so was this an early trial set, or has it been mislabelled/badly restored? Figs.1-4 above have been copied from *Al Sternagle's Erector Parts Illustrated*.]

• Re the **ERECTOR 24t Gear** (23/666), the standard pattern prior to 1924 was plain with no face holes. My 2-hole version has a 7mm centre hole and no boss. [My mistake over the standard Gear, the 2-hole version was listed from 1914 through 1920 and was never included in any sets. I wonder if Don's example was a disc that 'got away' before it was 'bossed'. It's true that in some brochure illustrations it doesn't appear to have one but it always cost 15c against 10c for the unpierced one with boss.]

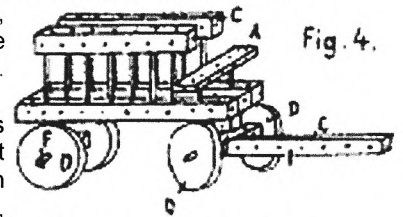
• Were the **STEEL ENGINEERING** Curved Girders the same curvature as the equivalent **ERECTOR** parts D & E?

• Colin Hinz has a pretty Russian set with the transliterated name of **VOENNAYA TEKHNKA** (Military Engineering), which was apparently made in St. Petersburg in 1999. It is packed in a transparent plastic box and the parts resemble **KONSTRUKTOR** [3] (see 22/648), but are steel rather than aluminium. The 16 models in the manual are chiefly army units, & vehicles.

• The 2000 Database lacks some figures for **NECOBO**. The following are from a batch of parts including Mod.1 Gears (see 7/147): bosses are 4.1mm bore & double-tapped 5/32" BSW; Axles are probably 4.06mm Ø, though some with the parts were 4.02mm. Other points: the bore of the Cone Pulley, #176, is less than 4.06mm; the nicked boss of the Face Plate (#83 but with 2 rings of 8 holes) is single-tapped; the tapping of the Handle Crank, #124, appears to be 1/8" BSW & the Set Screw is machined brass with a cheese head; the 16/60t Gears run freely at 1½" centres; the 20mm Bevel has 20 teeth and meshes nicely with **MECCANO** #30.

2. Details of an 11th Edition **C.I.G.E.A. manual** were given in 23/657. Luciano Luppi wrote that his 11th Edition is dated 'X 54'. He also sent some details of a 4th Edition from 1946, as follows. •Name: LA MECCANICA per ragazzi. •Maker: C.I.G.E.A., Milano, Via Nino Bixio, 15. •Date: XII 46, Quarta Edizione 50000 (could be the number of copies printed). •Page size: 246*170 mm deep. •64 pages + covers. Paper quality is much better than in the 11th ed. •Printing: half tones of models; cover is green with off white, grey, black inset. The inset is the same as the lid cover on 23/656. The 'something else' on it is a steam locomotive. •Language: Italian plus French/English/Spanish/German Introduction. •Sets covered A,B,C,D,E. •No. of models for each set: 23,20,21,10,10.

3. From Werner Sticht. • On **Korbuly's MATADOR patent** (22/623 & 23/682), the Austrian patent can be seen at http://members.xoom.com/oelli/matador/Patente/Nr.11515/Seite_1.gif & /Seite_2.gif). It is similar to the German one but also includes a vehicle with wheels, the Cart right. [On dates,



it was applied for on 2 Nov. 1901 and was granted (Beginn der Patentdauer) on 1 Dec. 1902. Hornby applied for his patent on 9 Jan. 1901, added to his application on 9 Oct. 1901, and his patent was granted on 30 Nov. 1901. The 1 Nov. date mentioned in OSN 23 is the application date for the UK patent, which was granted on 6 Feb. 1902. No application date is given on the German patent.]

• Due to a typing error the **5 STABIL DRGM numbers** given in 22/650 (248034-8) were incorrect – they are really 248934-8, as stated in OSN 13/348. [Due to another typing error the numbers from OSN 13 in OSN 22 were incorrectly given as 249934-8.]

• News from Jürgen Kahlfeldt: • Confirmation of the 1933 date for the introduction of **STABILA** given in 13/343. It is said in an ad leaflet dated 5/33 that it would be launched soon, and in one dated 11/33, Sets 1 & 2 are advertised as being 'new'. • The first known ad for the **KNIRPS** Motor (see 11/272) is from early 1933, and also listed at that time were the KNIRPS Conversion Sets 1a & 2a. The Nr.1a was mentioned in 11/273; the 2a was to make the Nr.2 into the STABIL Nr.48, & the same Set was also available as Nr.46a, to make the STABIL Nr.46 into the Nr.48. • A **Walther's Maschinenbaukasten** with manual has been found [it was mentioned in 13/348, and has mostly wooden parts].

• As would be expected nothing of **MÄRKLIN METALL**, **TEMSI** or **TRIX** at the **Nürnberg Toy Fair** in February, but **AMI-LAC** had a stand, and so did **Eitech**. The latter showed a Lorry-mounted Mobile Crane which stood about 3m high. Also present, the firm **Dickie-Schuco**, who use the old Schuco trade mark, and have started to sell a system which looks like repackaged **MERKUR**. [It is hoped to have more

Correction The transliterated name BOENNAYA in 25/717 & 718 should read VOENNAYA (my thanks to Don Redmond). This set in question is no doubt similar to the one mentioned in 24/714, though some details are not identical.

ITEMS FROM LETTERS

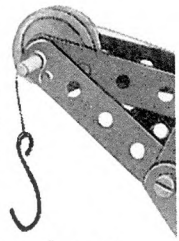
1. From Thomas Morzinck. • On the **ANKER Metal Parts** (25/730) The set with the 1897 parts offered by Richter in that year cost (a very expensive) 60 Marks. One year later it was deleted. Tobias Mey mentioned in his book *Zum Bauspiel*, that the Keller brothers - former employees in Richter's factory - sold their own Bridge Set from 1897 using preformed metal parts. In their advertising literature the Keller brothers called Richter's 1895 Bridge Set 'a screwed idea'. ('eine verschraubte Idee' in German). [The Keller Set may be even earlier. A UK patent No.5781 in the names of Georg & Paul Keller is dated 1890, and the parts in it (owned by David Hobson) correspond to those believed to be from a Set which was awarded a prize at a London exhibition in 1891, and also to those in a photo of a Bridge made from the 1897 Set above. The main elements are Straight & Curved T-section Girders, joined by Flat Strips which push into the double wall web of the Girders to represent uprights & bracing. A George Wetzel sales list sent by Don Redmond has an illustration of a Keller Bridge Set called **DIAMOND BRIDGE BUILDER**, with 4 children ('one Chinese, one American Indian, one white, & one Ethiopian') looking at a Church made from blocks, and a Bridge with block piers and a span of the metal parts.]

• Tobias mentioned that the early **DUX** parts (c1938) look like the Julius Weiss parts from 1892.

2. From Don Redmond. • More on **NECOBO**. The parts mentioned in 24/714 were from a lot which are probably a large part of an early No.4 Set, plus some later parts, and some which may or may not be NECOBO. The manual with them covers Set 0-4 and its parts list goes up to only PN 99, so is earlier than either of the MCS lists, and fits between the 1st & 2nd manuals described in 4/57. The 11 & 25h Strips have large-radius ends but there are also 11h, and 3 & 5h, with half-round ends. There are 2 sets of 1" Pulleys: 3 have red painted steel discs and very fine (small, round) peening on the brass boss; the other 4 have aluminium discs and steel boss with very deep conical peening. The aluminium Pulleys had a set of fat white soft Rubber Rings of 5mm circular form, 35mm o.d. The red ones had black rubber Tyres with a tread of 5 circumferential raised lines & radial raised bars on one sidewall. There was also one Tyre about 7mm thick, 38mm o.d., with NECOBO in raised lettering on one side. The aluminium Pulleys are suspect since there were also red Loose Pulleys. All the Gears are Mod.1 and the 60t is the early unperforated type. The Flanged & Triangular Plates, and the Face Plate are red. The Flexible Plates are aluminium painted dark blue. Under a red & ivory daub of enamel the Windows (#126) seem to have been painted silver. Strips, A/Gs, & Railings are dark green, darker than the early MECCANO dark shade. The red is quite light, between Meccano's light & medium. The parts have a surprising range of thickness. 25h Strips are 1.38mm; 11h Strips 1.0mm; Railings .84mm; 5*4h Triangular Plates 1.18mm; Windows .81mm; but Trunnions are only .67mm. Two types of Collar were found, both tapped 5/32" BSW. One is 10mm Ø, 7mm thick, double-tapped, and the other 8.5mm Ø, 6.5mm thick, & single-tapped. Two later parts are the Cone Pulley, #176, machined from brass with a concave rear (boss) face, and the Eccentric, #180, which has a brass arm/loop held between two red steel discs by a brass boss and a matching brass stub, both peened with a very deep, conical bottomed recess. [A small lot of later Strips, Girders, & Trunnions (up to PN 195C but none more than 9h long) are also the very dark green - the Girders are about .8mm thick, the Strips 1.05mm, and the Trunnions

.85mm.]

In a later letter Don pointed out that the Hook #90 hasn't been seen, and isn't illustrated in any parts list, but in the manual models is shown as the wire type right. Also it seems likely that the Faceplate #83 with the 2 rings of 8 holes (see 24/714) is an early part because the 6cm Disc, #82 (a Faceplate without a boss), appears thus in several of the manual models. Later, as shown in 4/59, both had the pattern with radial slots.



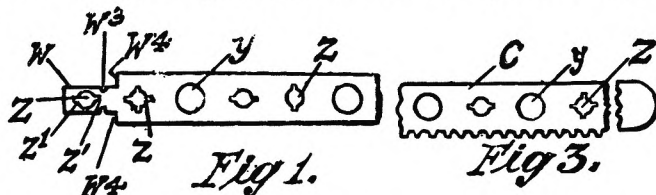
• On **STEEL ENGINEERING** (see 23/666), the wings of the formed Collar, X37, are near circular in shape, as opposed to the ERECTOR rectangle.

• In response to a question to Don about **WISDOM** (to include also CONSTRUCT-O-STEEL & CONSTRUCTION MODELS), he wrote that there are two patterns of slotted holes in Trunnions & 5*11h Flanged Plates. Most have rounded ends but some have large-radius 'BRAL' ends. The length o/a is 6.4mm for both. All the slots in known examples of the other sizes of Flanged Plates have rounded ends. Note that the Flat Trunnion is not made from the same blank as the Trunnion, and has no slotted holes. On colours, the 5*11h Flanged Plate is known in light, medium, & dark* blue, and medium, & dark* red; the Trunnion in medium, & dark* blue, and in two shades of dark red*. The asterisks denote a lacquered finish, with a metallic look.

3. From Tim Edwards. On Chinese **MECHANIX** (see 24/710), there is also a 001 Set with 68 parts, price £3.50. [A 002 Set with 108 parts has also now been seen.]

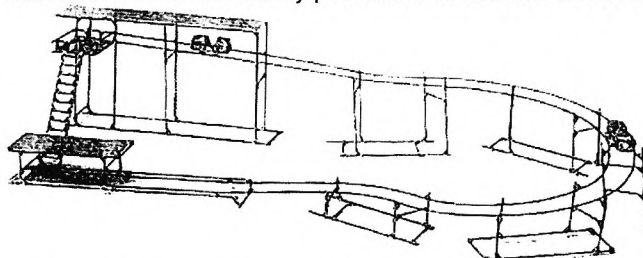
4. Josep Bernal wrote that **BRAL** is no longer being made. [The BRAL web site, www.bralsystem.com has just a home page with 'stiamo ritornando' on it - we will return? Let's hope so.]

5. From Jack Little. • On the **Day patent** (22/637), Jack sent a copy of the original Australian patent (No.6000/22, accepted 27th Nov. 1922), with added changes to the figures arising from an Application for Amendment on 5th August, 1924. The text is similar to the UK version but not identical and the original figures differ too in detail. Fig.1 below shows



a different pattern of holes for example, and the Strip in Fig.3 has a serrated edge & rounded end. The purpose of these features isn't explained. The changes made to the figures in 1924 took the form of overwriting some with a large cross and writing Cancelled & 18/11/24 alongside. 3 of the 4 cancellations are of the parts shown in Figs.8, 9, & the righthand end of Fig.4, in OSN 22. The parts in question are made in the same way as the EZY-BILT Clips (22/636) but whether that had a bearing on the matter isn't known. The fourth change was to delete the slitted end of the Fig.2 Strip, though similar ends with a slit with centre hole remain unaltered.

• Also from Jack, the cutting below from the Nov. 1947 *Sportsgoods, Toy & Canvas "Retailer"*, which confirms that CLIRO (described elsewhere in this Issue) was sold in Australia. It is: unfortunately p31 hasn't been found and so it



A Scenic Railway made from the Schofield Model Building Set. Further details of this set appear on Page 31.

More NECOBO These notes add to those in 4/56-9, 5/85, 7/147, 24/714 & 26/778, and are mainly based on: a manual for Set 5 & 6 models; a Price List from April 1953; manuals for the Mechanisms sets; and some parts, probably most of a No.5 outfit (or more likely a No.4 and a No.4a), plus a few extras.

The 5-6 Manual Its covers and possibly outside pages are missing with 16, unnumbered, 240*167mm, remaining. The 5 No.5 models are from Locomotief to Sportwagen, and the 5 for No.6 from Havenkraan (a multi-jib crane on a gantry) to Vrachboot, the Cargo Boat shown in OSN 4. All are attractive models and a parts list & lengthy building instructions are provided (& needed) for each. Some of the photos of a rather splendid No.5 Battledozer (Google translates the Dutch name as Bulldozer Gun Carrier), & a No.6 Fire Engine, are shown overleaf, together with a list of their parts.

The PARTS & SETS Fig.6 gives the set contents of Sets 3-6 taken from the last 2 pages of the Manual with the 'a' sets omitted, and also the contents of Sets 0-2 taken from the last manual described in OSN 4. Fig.7 lists all the other parts in the system which were not used in Sets 0-6, taken from the 1961 Price List shown in OSN 4, and it also has the illustrations of certain parts, taken from various sources. These may help to identify some of the parts in Fig.6, but even then all may not be clear and the following may help. **#11a**, not known and not used in the No.6 models. **#12-21** Flat Girders. **#22** A/B. **#58, 59, 60c** Perf. Plates 5*15, 5*19, 9*11h. **#86, 85**, small brass Pulleys with, w/o boss. **#91** Screwdriver. **#92, 92a** Bolts. **#92d** Nut. **#92e** Washer. **#94** Spring Clip. **#140** Flanged Wheel – it can be seen as the steering wheel in the Bulldozer. **#174** Tension Spring, short enough to be used with the Pawl with both mounted on a Face Plate. **#187** Threaded Coupling. **#200** Sprocket Chain. **#201-5** Sprockets. **#210-2** Hinged Plates. **#215-7** Door Hinges? (a NECOBO first?). A few of the parts are shown below.

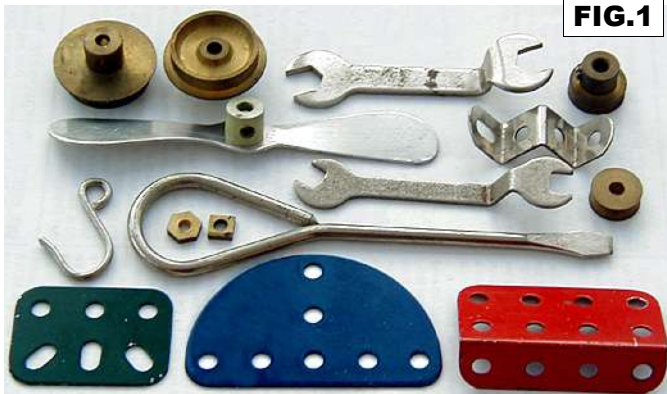


FIG.1

To show how the system grew over the years the following parts were listed in the first 0-3 manual in OSN 4: #1-73, 74a-k (except 'j', which was never used), 80-84, 87-94 (92 & 93 were 6 & 15mm Bolts with Nuts). The parts included 10 Flat Girders (all the MECCANO lengths) but in the next manual seen, a 0-4, none were listed. This remained the case until 4 sizes were reintroduced for Set 6 was introduced.

Sets 0-4 remained much the same throughout. Set 0 for instance lost 2x 1*5*1h DAS but gained a 5*9h Flanged Plate, an extra Axle, 4 Washers, and 2 each of the Flat Bracket, A/B, 3*9h Flexible Plate, Rubber Ring, N&B, & Spring Clip. No.4 gained an Axle, a Coupling, 1 each of the brass Pulleys #85 & 86, 8 Washers, 4 Nuts, and 2 each of the Flat Bracket, A/B, Bolt, & Collar.

Very few sets, in fact only two, have been seen on Ebay, Marktplaats, etc. The lid from one, a No.1A is shown in Fig.2; and is the same design as the early manual cover in OSN 4. The second was also in a red box, but larger, and with a similar label of probably the same size.

All that is known of the smallest, Junior, set is the manual cover shown in Fig.3. The Crane is similar to the

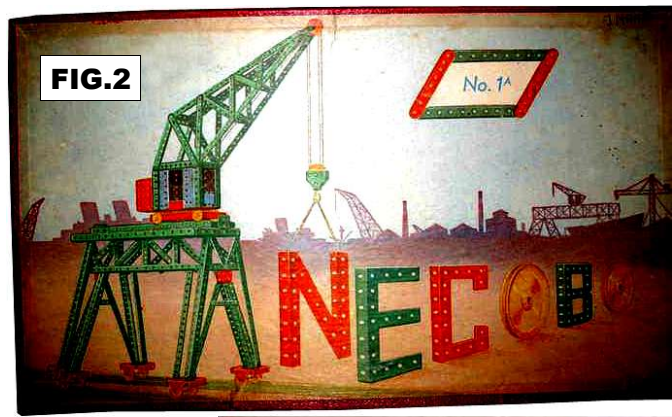


FIG.2

one on the later manual cover in OSN 4 but not identical. The manual was said to contain 16 pages. At some point the Junior set was discontinued – it was not included in the Bé & Bé Price List mentioned in OSN 4. Said List would have been later than the 1961 List because the latter did include the Junior as well as all the parts in the Bé & Bé List.



FIG.3

The 1953 PRICE LIST The same Sets were listed as in the 1961 List described in OSN 4: the Junior, 0-6, 0a-5a, A, B, & C. The parts were also as in 1961 except that the Trunnion variants #67b,c & 68a,b,c, and the hinged parts #210-217 had not been introduced. Also the main manual was 0-4 rather than the later 0-2 & 3-4. And unlike in 1961 the Mod.1 Gears (#127-130a as described in OSN 7). were shown as well as the later ones. In the undated, but earlier Price List in MCS/FB (p3/4) only the Mod.1 Gears are listed.

The MECHANISMS SETS The Dutch name Aandrijfdoos translates as Drive Set and Sets A, B, & C were available. Two manuals are to hand, both in portrait format, 136*213mm. The first, Handleiding v. aandrijfdoos, was in the MCS Price List and has 8 pages. It starts by saying that the Aandrijfdoos (singular) contains the most common parts needed to drive your models, and it is therefore probable that at the time there was only one set. Various simple mechanisms are shown, the final one, right, uses the Mod.1 Gears. This manual was also listed in the 1953 List along with the second, 'Handl. v. aandr. A.B.C.' It has 12 pages plus (the missing) covers and has a

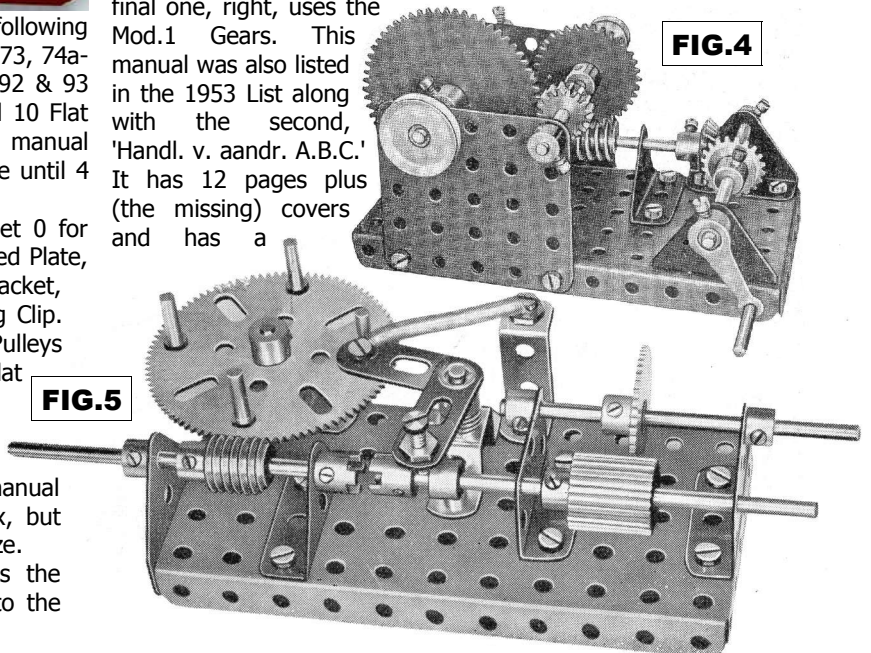
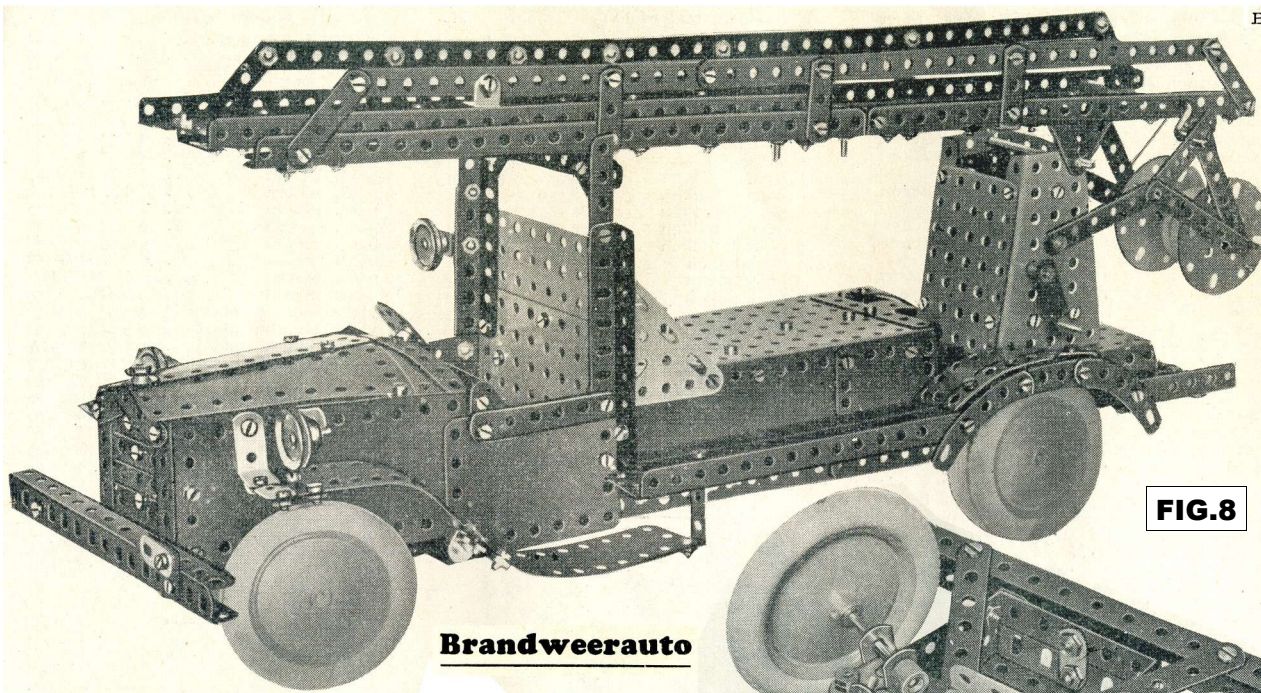


FIG.4

FIG.5



Brandweerauto

FIG.8

Benodigde onderdelen		Benodigde onderdelen	
No.	No.	No.	No.
14	1	2	48
4	2	4	50
16	3	1	51
8	4	1	52
4	5	1	53
2	6	1	53A
2	8	1	54
4	10	1	55
9	11	1	57
2	14	1	60
2	15	1	60A
2	18	1	61
16	22	1	62
3	23	1	63
4	24	1	66
4	25	2	66B
4	26	4	67
4	27	7	68
6	28	2	70
2	29	1	72
4	30	2	74C
2	31	2	74F
6	32	1	74G
2	33	1	74H
2	35	1	74K
1	36	1	80
2	37	1	81
2	41	1	82
2	42	1	83
2	44	1	85
3	45	1	86
4	45A	4	87
2	46	3	88
2	47	6	88A
		4	88B
		6	88C
		2	89
		4	95
		2	99
		2	107
		2	108
		2	109
		1	109B
		2	112
		4	110
		2	116A
		4	118
		1	119
		4	120
		4	121
		3	122
		3	123

278 korte schroeven
20 lange schroeven
306 moeren
7 veerclips

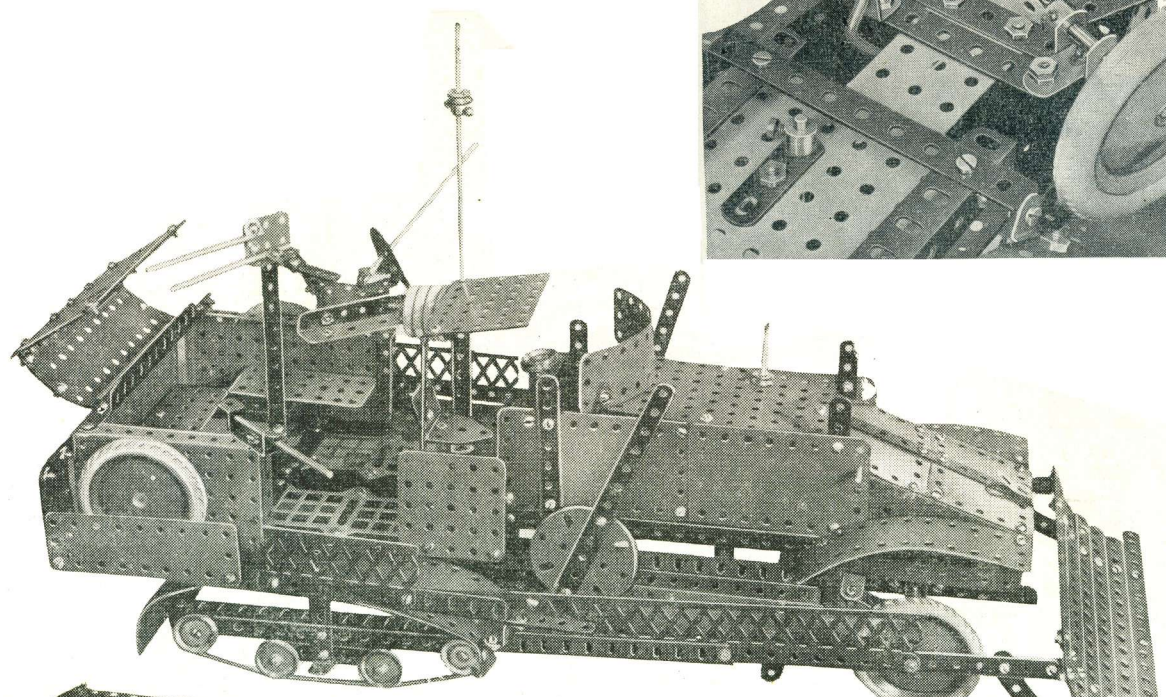


FIG.9

Benodigde onderdelen		Benodigde onderdelen	
No.	No.	No.	No.
6	1	1	65
6	3	1	66
4	4	3	67
4	5	6	68
2	6	2	69
12	7	2	70
7	8	2	71
6	9	2	72
8	10	2	73
2	11	2	74A
14	22	1	B
4	23	2	C
4	24	2	D
4	25	1	F
4	26	2	G
4	27	2	H
4	28	2	J
4	29	2	K
4	30	1	80
4	31	1	81
4	32	1	82
2	33	1	83
2	34	1	84
2	35	1	85
2	36	1	86
2	37	1	87
2	38	1	88
2	41	4	88A
3	43	4	88B
2	44	4	88C
2	45	4	89
4	46	1	95
2	47	2	97
2	48	1	98
4	49	2	99
4	50	1	106
1	51	2	107
1	52	2	108
1	53	1	109
1	54	2	110
1	55	2	118
1	56	1	121
1	57	2	123
1	60	4	126
1	61	1	140
1	62		
1	63		
1	64		

8 veerclips
208 schroeven en moeren

Bulldozer gevechtswagen

similar opening paragraph but it refers to Aandrijfdozen, plural. The 3 non-Gear drives in the first booklet are shown plus numerous other mechanisms including the example in Fig.5. Others also use the later Gears, plus Sprockets, Slotted Strips, and the Pawl & Ratchet. Nothing is known of the contents of A-C sets & particular sets are not mentioned in either booklet.

The PARTS They are well made with 4.4mm holes (a few 4.3mm) at 12.7mm pitch. Slots are 7.8-8.4mm long. The thread is $\frac{5}{32}$ " BSW. Bosses are brass, 9.9-10.1mm Ø, bore 4.1 (a few 4.2), double-tapped, with deep, MÄRKLIN-type peening.

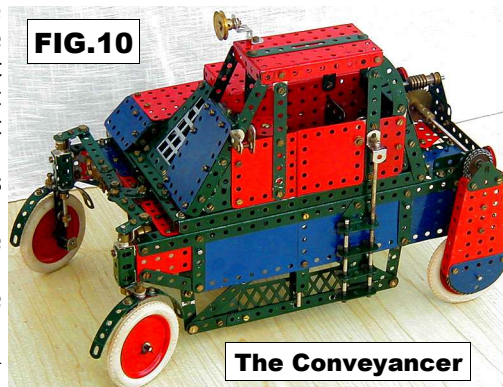
The various parts seen are listed below, and except where stated are MECCANO pattern (or MÄRKLIN for 'their' parts).

- **Strips** are 12.6-12.8mm wide, all with large radius ends.
- **Brackets**: • #11 (Flat Bracket, 27mm long o/a, with, unlike its MECCANO counterpart, the slotted hole extended outwards); • #22 (A/B, typically 13.3*14.8mm o/a); • #33 (D/B, 14.8mm wide o/a); • #41 (1*2h A/B, no slotted hole); • #69, 70 (1,2h Reversed A/Bs); • #71 'W' Bracket, MÄRKLIN-like but with one end hole slotted; • #73,72 (Double Bent Strip, & MÄRKLIN variant spanning 5 holes).
- **A/Gs**: all, #23-32.
- **Flat Girder**: #13 (4h long).
- **DAS**: all, #34-38.
- **Flexible Plates**: #43-45, 46-50 (3 & 5*5,7,9,11h, but not the tapered ones). No slotted or centre holes. 0.30mm thick. All are steel, unlike those described in OSN 26.
- **Perforated Plates**: #51-53, 54-57, 60 (3*5,7,9; 5*5,7,9,11; 7*11h). No slotted holes.
- **Flanged Plates**: #61-66 (3,4h long Girder Brackets; 3*5h (not shortened as in MECCANO); 5*7h, 5*9,11h. No slotted holes.
- **Trunnions**: #67,68. 5h pattern.
- **Axles**, 4.0mm Ø, nickelled with slightly rounded square ends.
- **Discs**: #80 Wheel Disc, & #82 Bush Wheel, both 37mm Ø; #82, & #83 Face Plate, both 62mm Ø.
- **Semi-Circular Plate**: #84.
- **Pulleys**: no face holes: • #85,86, solid brass, 5mm wide: Loose, 13mm Ø; Fast 15mm Ø. • #87,88, 25mm Ø: #87 Loose, steel, red, 3½mm wide, eyelet boss. #88 Fast, brass, 4½mm wide. • #88a, steel, red, 59mm Ø, 8mm wide.
- **Rubber Ring** #88b, for #87, white with NECOBO on one wall, 38½mm Ø & 7mm wide when fitted.
- **Tyre** #88c, for #88a, white with NECOBO on both walls, 82mm Ø & 11½mm wide when fitted (earlier this part was described as a Rubber Ring).
- **Crank Handle** #89, 4.0mm Ø, 113mm long o/a.
- **Hook** #90, see Fig.1, 2mm nickelled wire, 30½mm long o/a.
- **Screwdriver** #91, see Fig.1, 3.9mm wire, 121mm long o/a.
- **N&B**. 2 types were found: • 1) brass, with 8.0mm A/F hexagonal machined Nuts, 2mm thick, and 6-6½ & 16mm u/h Bolts with 6.0mm Ø cheeseheads; • 2) brass steel, with 6.4mm A/F square pressed Nuts, 2mm thick, and 6½ & 16mm u/h Bolts with 6.0mm Ø tapered cheeseheads. All the manuals seen show the large hexagonal Nuts in the models and so these were no doubt the original pattern. This fits with the parts to hand if they were a No.4 & a No.4a, because there are appreciably more of the hex type than the square. The authenticity of both patterns is supported by the 2 types of Spanner found in the Lot, one for the hex Nuts & one for the squares.
- **Washer** #92e nickelled, 10mm o.d.
- **Stelschroef** #93. Set Screw? but none found and more likely the 4mm long nickelled Grub Screw found in many of the bosses.
- **Spring Clip** #94, blued, 5.6mm wide. The parts also included 3 wound-wire type Clips, similar to the VOGUE part but with shorter 'wings' – they grip well but no mention has been found of this part in the literature to hand.
- **Formed Strip** #95, 5h with slotted end holes (as #109), 3" radius.
- **Propeller** #96, see Fig 1 – aluminium including the boss, 100mm long o/a & 15mm wide.
- **Railings** #97,98. They differ from the MÄRKLIN part in having round holes, being deeper (by 5mm to 38mm) &

- having wider (3¼mm) cross bracing.
- **Flanged Sector Plate** #99. 8h long, no slotted holes, straight ends.
- **¼" Pitch Strips**: #106-8 (4,6,8h).
- **Slotted Strips**: #109 (5h with the end holes slotted outwards); #109a (9h with centre 3 holes slotted together).
- **Curved Strip** #110, 3" radius, with end holes slotted outwards.
- **Triangular Plate** #116, not equilateral but 5h spacing possible on all sides. 8.7mm slots.
- **Collar** #118, brass, 9.5mm Ø, 7mm long.
- **Coupling** #119, brass, 10.0mm Ø, 22mm long with end holes at 15mm pitch.
- **Joint Plates** #120-123, they differ from the MÄRKLIN pattern, particularly in having fully rounded corners.
- **Spanners** #125, see Fig.1. About 70mm long, with the width of the centre portion 6mm for the square version and 8mm for the hexagonal.
- **Window** #126, with, unlike the MÄRKLIN part, 10*10mm square openings, & holes at 5*5cm pitch, not 5*4cm.
- **Flanged Wheel** #140, see Fig.1. Solid brass, 27mm o.d with 23mm Ø tread.
- **Finish** All the parts listed under 'Brackets' above are nickelled except the wide MÄRKLIN type Double Bent Strip. The Window is silver; the Flexible Plates & Semi-Circular Plate are a rich blue, slightly darker than the prewar MECCANO shade; and the rigid Plates, Disc parts, & Pulleys #87, 88a are light red, about the 1960s MECCANO colour. However red parts in a slightly darker shade were described in 26/778 and other examples have been seen since. Apart from the non-ferrous parts, all the other parts are dark green, appreciably darker than late 1920s MECCANO. The green paint comes off rather easily, the red is much better, and the blue is excellent, as good as the prewar MECCANO Flexible Plates. Fig.7 includes a part in the 3 main colours.

REMARKS In its developed form NECOBO was a quite sophisticated system with around 200 different well made parts, even if a few of them might be thought something of a luxury. In the latter category I'd put the variations on the basic Trunnions, the 'W' Bracket (has it ever been found to be essential?), the 6 Hinged Plates, & perhaps the Window. I almost included the Tapered Flexible Plates but they are used to good effect in some manual models, in the tapered legs of a Crane's tower for example. NECOBO was particularly strong in its range of Plates but lacked any large circular parts, an intermediate size of Pulley would have been useful, & more Curved Strips would have been the icing on the cake. Useful MECCANO parts not included were the Rod, and Rod & Strip Connectors, the Compression Spring, & the cylindrical parts. Also the Triangular Flexible Plates and 4:1 ratio Gears which Liverpool introduced in 1954, all far more useful than the 12 NECOBO parts introduced after 1953. And rather surprisingly for a 'serious' system, no mention is made in the Lists or Manuals of a motor to drive the models. Of the MÄRKLIN inspired parts by far the most useful are the ¼" Pitch Strips.

I made Meccano's 1962 No.8 Conveyancer with the parts to hand plus a commercial 4½v motor/gearbox & 2 extra Bush Wheels. No real difficulty was found in adapting the design to the NECOBO parts but a few points of interest did become apparent. The steering geometry was improved using the ¼" Pitch Strips in the linkages, but there was a lot of lost motion with Bolts running in the unusually large 4.4mm holes. The Flat Bracket & Curved Strip with the outwardly slotted end holes were often useful but because they were longer than usual there were times when they fouled the adjoining structure. This also applied to the 5h Slotted Strip but didn't matter so much because there was also the normal version. Possible improvements would have been slotted holes in the ends of the Flexible Plates, and face holes in the large Pulley & Mod.1 Gears (I had none of the later Gears, some of which at least were pierced).



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

EDITORIAL First, apologies for the lateness of this Issue. As some readers will know it is because I had, unexpectedly, to have a heart operation.

For the future, I plan to continue to produce OSN but regrettably it is probable that Issues will appear when they are ready rather than with their current, twice a year, regularity. This for several reasons, but mainly because changes in my personal circumstances, quite unconnected with the operation, will mean that I will be unable to spend as much time on hobbies as I've been able to up until now. I'll give updates as to progress on my OSN website from time to time.

SHORTER NOTES, with thanks to all contributors.

1. **Snippet. A NECOBO Clockwork Motor.** Having expressed surprise in 44/1334 that there were no NECOBO Motors, the one right was offered on Marktplaats soon afterwards. No doubt its one lever would be a brake and so it would be non-reversing. What looks like a brass Pinion may have been misplaced on the winding spindle.

A Price List in the lot with the Motor lists Sets 0-6 plus the Junior outfit; Sets 0A-5A; and the Mechanism Sets A-C. But there is no mention of the Motor.

NECOBO: S5

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2. **Guibert's Encyclopédie.** Jean-Pierre Guibert continues his good work in updating his Encyclopédie des Jeux de Construction métalliques, and the 2012 version, on a DVD, runs to over 400 pages with details of some 800 systems. As well as new and 'new' systems, many of the earlier entries have been revised and more detail added.

The format is as before (see 43/1292) and each page can if desired be printed off as an A4 side. It may be hard to see the details of some images such as Illustrated Parts but all those I tried could be easily read after using the WORD Zoom facility. Also with WORD (though not with WORD Viewer) any image can be copied, and then enlarged after pasting it onto a blank page. Thus just the enlarged image can be printed off.

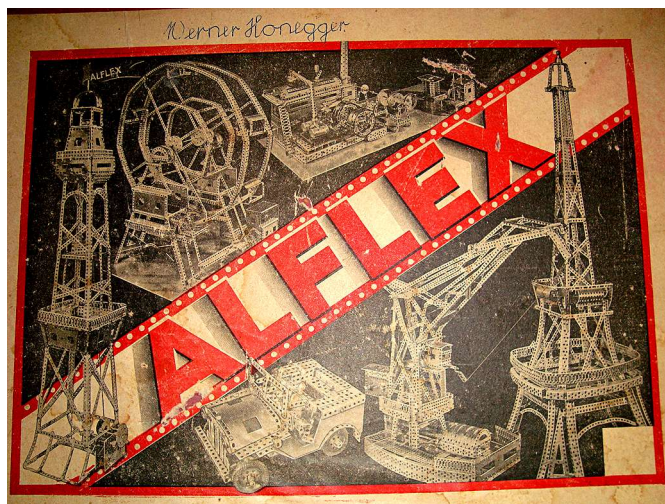
The DVD also includes an updated Database called an 'Index', again with the same format as before.

All in all a very useful reference, and having some years ago produced some Sheets to update and add to the now long outdated MCS, I understand just how much work has gone into J-P's Encyclopédie.

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Encyclopédie des Jeux de Construction

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3. **'New' System, ALFLEX.** Urs Flammer wrote of 2 sets found in Switzerland. The models on the lid label above are MIGNON (see 10/262) and a photo of the base tray of one of the sets looks identical to the later MIGNON No.3 in terms of both the parts and their layout. (The later MIGNON sets had fairground models, as opposed to 'Tower Bridge' on the lid label.) The manual is in French and is identical to the French edition of the one described in OSN 10 except that the Mignon name has been removed from the cover and the maker's name from the back cover. In fact neither 'Mignon' nor the maker is mentioned on the inside pages of any of the later manuals (the ones with fairground models on the cover, see OSN 10). In passing, details of the MIGNON manuals, as well as the sets, & the system's history, are given in www.mignonbaukasten.de.

Although the two sets were found in Switzerland Urs discovered that the AlfLEX name was registered as a brand (concernant un jeu de construction) on 19 July 1947 by René Guichard, in Paris. The registration was in the BOPI (Bulletin officiel de la propriété industrielle) under licence No.378.421, page 1809.

MIGNON was of course made in Germany by Gebr. Staiger of St. Georgen and it is possible that the ALFLEX sets were a special order imported by a retailer, perhaps French, perhaps Swiss. But if the latter why was the AlfLEX name used? It is even possible that there was a French ALFLEX system quite unconnected to the Swiss sets.

ALFLEX: S1

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4. **Freundeskreis Metallbaukasten at BEBRA** Model building is alive and well in Germany – an email-based group called Freundeskreis Metallbaukasten (Friends of MCS) hold regular meetings at Bebra, a town near the centre of Germany, chosen to minimise travel distances.

This information from Thomas Morzinck and he included the links below which show the models at the 2011 meeting. Feast your eyes (there is no associated write-up).

<http://www.metallbaukasten-eiermann.magix.net/meine-alben/!oa/6413895/>

<http://www.metallbaukasten-eiermann.magix.net/album#/meine-alben/!oa/6413895-75780919/>

<http://www.youtube.com/watch?v=Q082IjIvpYc>

Freundeskreis Metallbaukasten

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