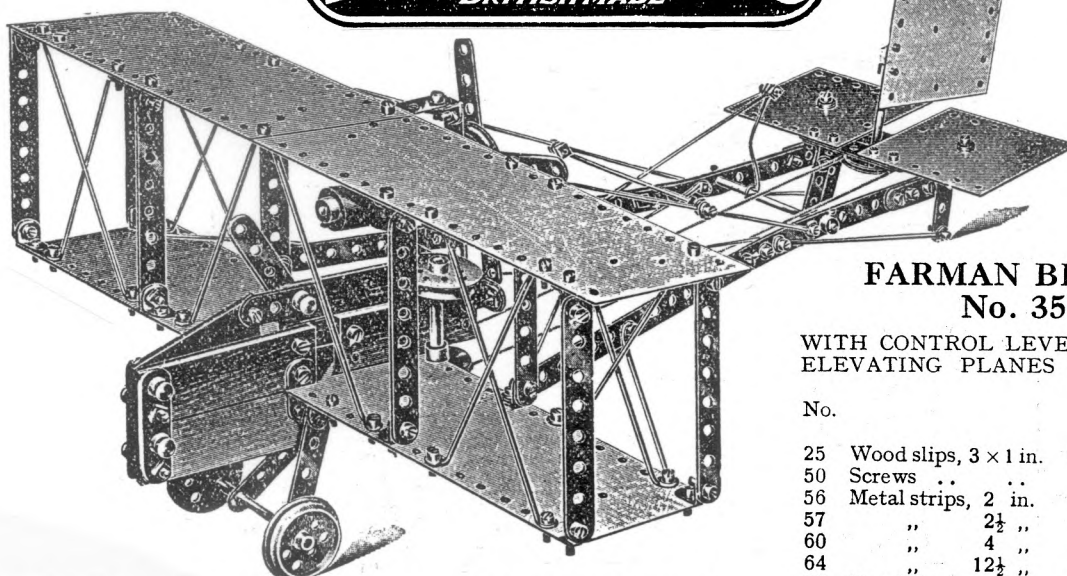


PRIMUS ENGINEERING

BRITISH MADE

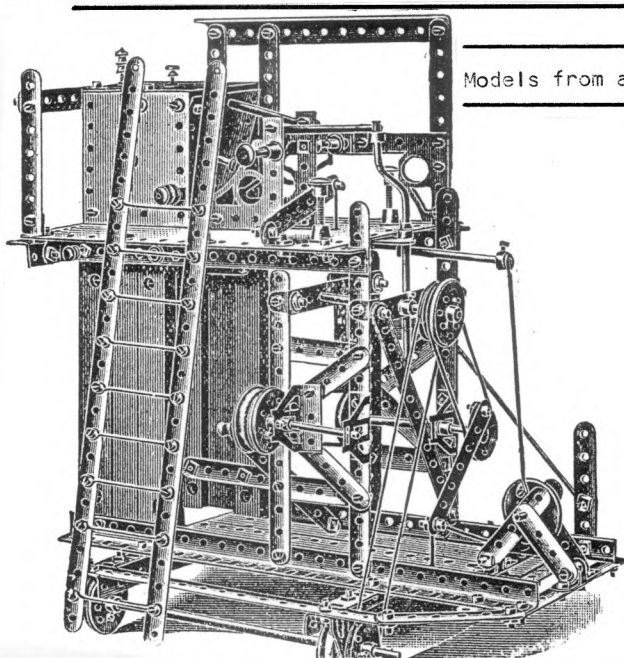


FARMAN BIPLANE No. 350.

WITH CONTROL LEVERS OPERATING
ELEVATING PLANES AND RUDDER.

No.		With No. 5 Outfit.	Additional Parts.
25	Wood slips, 3 x 1 in. . .	6	—
50	Screws . . .	112	—
56	Metal strips, 2 in. . .	16	1
57	" 2½ " . . .	4	—
60	" 4 " . . .	3	7
64	" 12½ " . . .	2	—
66	Brackets . . .	34	—
67	Metal plates, 8 x 3 in. . .	4	—
68	" 3 x 3 " . . .	3	—
75	Flanged wheels . . .	4	—
76	Grooved wheels . . .	3	—
77	Axle rods, 3½ in. . .	4	—
78	" 2½ " . . .	2	—
82	Collars . . .	13	—
84	Washers . . .	20	—
92	Knob screws . . .	4	1
96	Signal post rods . . .	4	18

The planes are made with 8 x 3 in. metal plates, overlapping and screwed together. Signal post rods are used for the stays and as connecting rods for steering. Cord is used as illustration for operating the rudder



Models from a Manual c. WW1.

GAS REGENERATOR

No. 269.

4	Side rails . . .	1	4	Plates, 3 x 3 . . .	68
2	Truck sides . . .	17	8	Trunnions . . .	74
144	Screws . . .	50	8	Wheels . . .	75
2	Angle bars, 6½ in. . .	53	4	" . . .	76
4	" 8 " . . .	54	4	Axles, 3½ in. . .	77
2	" 12 " . . .	55	3	" 2½ " . . .	78
9	Strips, 2 in. . .	56	1	" 1½ " . . .	79
6	" 2½ " . . .	57	16	Collars . . .	82
6	" 3 " . . .	58	1	Handle . . .	83
7	" 3½ " . . .	59	13	Washers . . .	84
3	" 4 " . . .	60	4	Buffers . . .	85
4	" 5½ " . . .	61	3	Lamps . . .	87
3	" 6½ " . . .	62	3	Knob screws . . .	92
3	" 8 " . . .	63	2	Rods . . .	96
2	" 12½ " . . .	64	6	Wood screws . . .	97
4	Architraves . . .	65	Extra parts:		
31	Brackets . . .	66	4	Collars . . .	82
4	Plates, 8 x 3 . . .	67	2	Axles, 8 in. . .	166

Does anyone know what a Gas Regenerator does, or did, and what the mechanical movements of the model represent?

ACCOUNTS. Dear Subscriber,

Your remittance of _____ received with thanks.

Your credit balance after deduction for this Issue and

is £ _____

Please renew your subscription if you wish to receive the next Issue.

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2032. More and different pieces for larger models, factories with several bays, etc.

NOTE. All sets contain instructions for a number of models, from the very large range that are possible. To fix buildings down or where machines are to be driven the Mounting Boards available are ideal.

BOITES TRANSMISSION. Drive sets.

2004. Allows the construction of a driving system complete with supports, giving a reduction (or step up) ratio of 3:8. Includes a 200mm shaft.

2005. Contains the complete range of pulleys from "30 to 40mm" (sic), a 300mm shaft and vertical support pillars.

2006. Contains the parts of the first two sets with in addition 2 bearings to fit on the vertical pillar, and 150mm and 300mm shafts.

BOITES DIVERSES. Other sets.

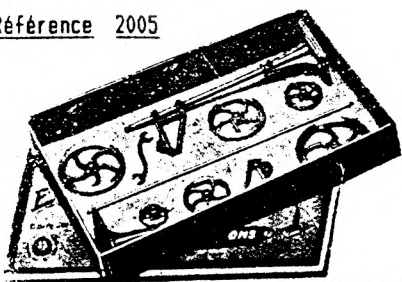
2012. Contains the parts needed to make the Winch 2000, a Reduction Unit 2007, and other mechanical assemblies.

2013. Has parts which allow the construction of the Enclosed Gearbox, 2002, etc.

Sets 2004, 2005, 2012 are said to be packed in red cardboard boxes; 2006 and 2013 in de luxe cardboard boxes. All these sets are supplied with a key for use with set screws, etc. The diameter of EDOBAUD shafts has not come out clearly in my MCS, it is stated in the list of parts to be 4mm; also the size of Part 552 (Threaded Rod) and 502 (Hex Nuts) is given as 3mm. The address of Etablissements Edobaud was 3 rue Edgard Quinet, OYONAX (Ain). Not all the parts referred to by Part No in the above descriptions of mechanisms are included in the list of parts.

Infos also says that in a future issue Edobaud constructional railway equipment will be described, there were also ready built train sets but there is little information available on these.

Référence 2005

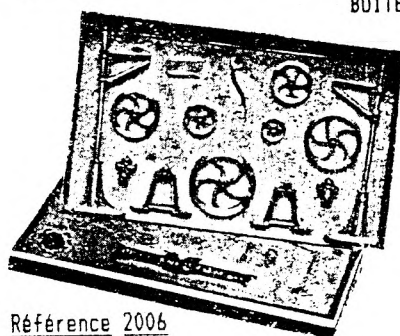


BOITES TRANSMISSION

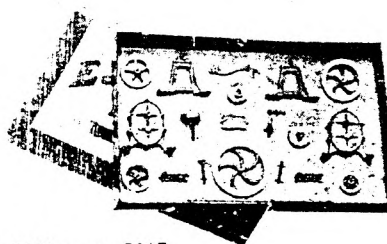


Référence 2012

BOITES DIVERSES




Référence 2006



Référence 2013

The ad below, sorry it has to be the wrong way up to fit it in, was sent by José Bernal Moreno and was from the periodical 'Little Folks' for January 1917. Clearly WW1 did not stifle competition. It is the only dated information that I have seen on PRIMUS and if, as seems almost certain, it was Set 1 at 7/6, then the range advertised didn't extend beyond Set 5. Perhaps Set 6 with its special parts had not yet been marketed, or perhaps it was unavailable due to the war.

Little Folks



I'VE GOT ONE!

"Mine is wood and metal — is yours only metal? The wood parts make my models look real and they're solid!"

FOR 7/6 you can get a Primus outfit—the world's finest constructional toy — which makes 41 models; aeroplanes, gun-carriages, railway wagons, munition-lorries, bridges, cranes, etc. The models look and work like the *real thing*. The most fascinating and instructive toy imaginable for any boy. Each box complete with tools and all instructions. Other sets 12/6, 25/-, 37/6 and 50/-.

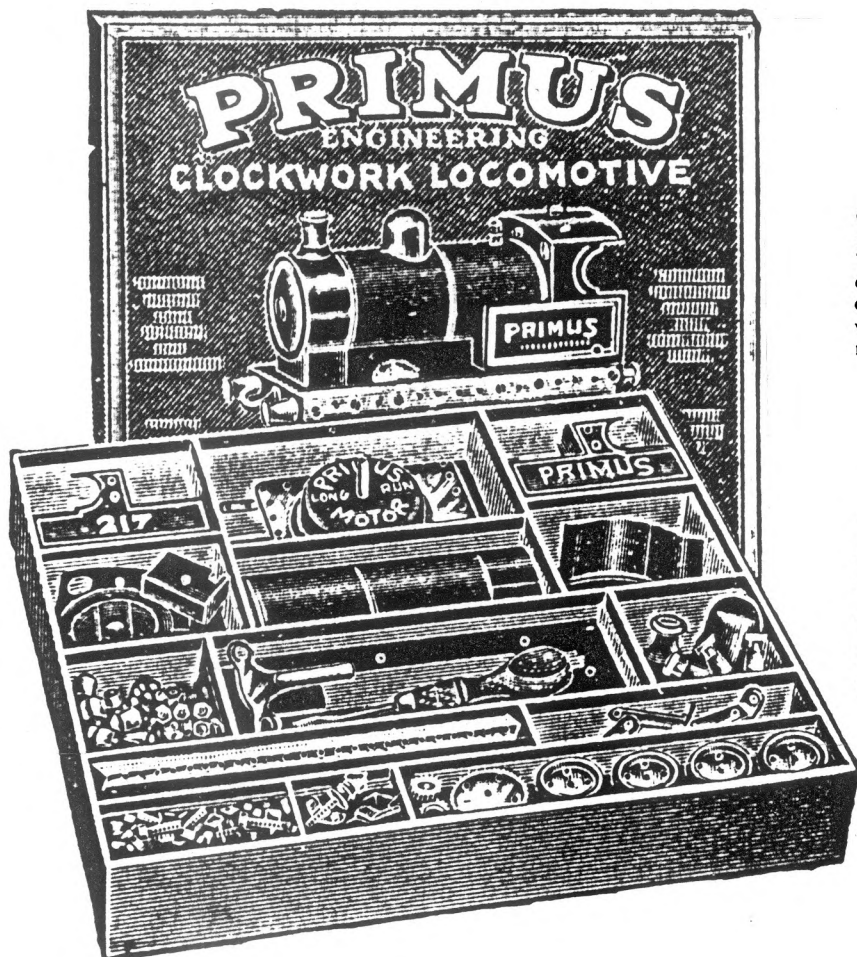
ILLUSTRATED CATALOGUE
post free from
W. BUTCHER & SONS LTD.,
Farringdon Avenue,
LONDON, E.C.

"PRIMUS"
ENGINEERING
THE BRITISH TOY FOR THE BRITISH BOY

CONTENTS OF MARKLIN SETS A, B, C, E3

PN	Description	Set:	A	B	C	E3	PN	Description	Set:	A	B	C	E3	PN	Description	Set:	A	B	C	E3
10000	Fishplate		4	4	4	-	10312	Pulley, n/b, 12mm		1	1	1	-	11500	Cord		1	1	2	-
10001	Double Bracket, $\frac{1}{2}$ "		-	1	4	-	10325	" 25mm		2	4	4	-	11515	Spring Cord, 150mm		-	1	1	-
10002	Angle Bracket, $\frac{1}{2}$ "		10	14	16	20	10336	Flgd Pulley, 36mm		-	-	4	-	11605	Curved Strip, 5 h		2	2	4	-
10003	Strip, 3 hole		-	2	2	4	10338	Pulley, 38mm		-	-	-	1	11631	Flat Trunnion		-	2	2	-
10004	" 4 "		-	-	-	2	10365	Flgd Wheel, 65mm		-	2	4	-	11632	Trunnion		2	2	2	-
10005	" 5 "		6	7	12	-	10395	Hub Disc, 95mm		-	-	-	1	11700	Spanner		2	2	2	-
10006	" 6 "		-	-	-	4	10450	Gear Wheel, 50t		-	-	-	1	11713	Hook		1	1	1	-
10007	" 7 "		-	2	2	4	10457	" " 57t		-	-	-	1	11716	Crank		1	1	1	2
10009	" 9 "		-	-	2	2	10595	" " 95t		-	-	-	1	11718	Coupling		-	-	-	1
10011	" 11 "		4	6	16	2	10719	Pinion 19t		-	-	-	3	11720	Worm Housing		-	-	-	1
10025	" 25 "		-	4	10	-	10725	" 25t		-	-	-	1	11727	Washer		-	10	10	10
10040	Rev Ang Brkt, $\frac{1}{2}$ "		-	2	2	2	10901	Pawl		-	-	-	3	11731	Special Bracket		-	-	-	2
10044	Dble Brkt, 3x1x3 h		1	1	1	-	10910	Worm		-	-	-	1	11745	Hanger		-	-	-	1
10045	Double Bent Strip		-	-	1	-	10914	Universal Gear 14t		2	2	2	-	11765	Special Bracket		-	-	-	2
10046	DAS, 2x7x2 holes		-	-	-	1	10918	Gear Ring, 18t		-	1	1	-	11793	Universal Coupling		-	-	-	1
10055	Str 5h, oval end h		-	-	-	2	10940	" " 40t		-	1	1	-	11800	Parts Box		1	1	1	1
10059	Strip 9-hx $\frac{1}{2}$ " pitch		2	2	2	-	10957	" " 57t		-	-	-	1	11810	Parts Tray		1	1	2	1
10067	DAS, 1x5x1 holes		2	4	6	-	11015	Hub Disc, 150mm		-	-	-	1	12400	Plastic Axle Clip		8	8	12	10
10105	Ang Girder, 5 hole		-	-	-	2	11036	Bush Wheel, 36mm		1	1	1	-	14000	Screwdriver		1	1	1	-
10107	" " 7 "		-	-	-	2	11059	Collar		-	2	4	6	14002	Screw, 8.5mm		35	50	85	75
10111	" " 11 "		-	-	-	6	11320	Flgd Plate, 5x11 h		1	1	1	1	14003	" 12mm		15	20	35	25
10125	" " 25 "		-	-	4	4	11330	" " 5x7 h		-	-	-	3	14004	" 25mm		1	1	1	-
10203	Axle, 30mm		-	-	-	3	11340	" Sector Plate		1	2	2	-	14010	Nut		55	75	130	100
10205	" 50mm		2	2	2	3	11405	Flex Plate, 3x5 h		2	2	6	-	14025	Tyre for 10325/914		4	4	4	-
10209	" 90mm		-	-	2	3	11415	" " 5x5 h		2	4	6	-	14036	" " 10336		-	-	4	-
10211	" 115mm		3	3	4	-	11419	" " 5x9 h		-	-	4	-	14900	Manual, German		1	1	1	-
10213	" 130mm		-	1	3	1	11421	" " 5x11 h		2	4	6	5	14902	" "		-	-	-	1

NOTE: Sets E1 and E2 convert A into B, and B into C. They contain exactly the parts necessary to do so.



PRIMUS LOCOMOTIVE OUTFIT

Contains 109 separate parts which are required to construct the Locomotive. The finished model is one of the best examples of constructional toys ever offered. Complete with Primus Clockwork Motor, fitted with control levers and reversing gear.

Price (including Instruction Book)

37/6

This set makes one locomotive and the superstructure is nicely made and finished. The wheels though are standard PRIMUS Flanged Wheels and they run in standard Trunnions, and somehow to me they don't marry happily with the top part. A rare item this and the ad, from a Bassett-Lowke catalogue of probably 1926 or 1928, came from Mick Burgess.

• 85049: Pulleys. (4 off). 2 sizes are shown on the packet, and the larger one is red in one of the models shown. (I have a Pulley which looks just like DR25/50 in MCS FB, it is of red plastic with a brass boss moulded into it).

There are other parts shown in the models and the sets which are not it seems included in the packets. For example the Flanged Plate, Hook, and Double-ended Spanner SCH4 shown in MCS FB. As far as can be seen all the parts are consistent with MCS except for the shortest A/G being called WS9. In the earlier German parts in MCS it is WS8 and that would be consistent with the standard TRIX practice of ending the designation for Strips and A/Gs with the number of holes in the centre of the 3 rows. Although it can't be confirmed that the WS9 here is the same as the earlier part, in an older German manual WS9 is used for the 8 centre hole part. In fact no A/G with anything other than the 8 centre holes is known and why the designation is irregular is a mystery - the English PN is A9, so the error, if error it be, is international. Every illustration of the part available (all postwar), except one, shows 8 centre holes. The exception is a Belgian leaflet from the late 1940s where there is a drawing of the part in a set, with 9 holes in its middle row and 10 in the outer ones.

The catalogue reference of the motor is 85041 and it is described as GM1; apart from the base it looks identical to that in MCS FB under the same reference. It runs on d.c. of up to 12v.

The UK agent for TRIX is Euro Toys and Models Ltd, Euro House, Llansantffraid. Powys. SY22 6BH, they do not stock the construction sets but whether they could get them to order is not known.

TUBEPLAC The parts shown in MCS are stated to be full size (MATÉRIEL GRANDEUR RÉELLE) but this meant that the hole spacing in the Plate #10 is different to that on the shorter sides of #11 for example. I had one or two other questions about the system so I asked Jean-Louis Figureau if he could help, and he replied as follows:

- All the parts are made of steel.
- The hole spacing in #10 is 16mm; in the other Plates (#11-14) it is 12, 42 and 100mm as appropriate; and in the Link #30 it is 16mm.

He also sent a photo of the No 1 bis set that he owns and except for #10 all the Plates are included painted both yellow and red, #10 is only in red.

PRIMUS BIG WHEEL OUTFIT The nuts and bolts in this set do not have the usual PRIMUS 5/32W thread; Roger Baker showed me a set recently, complete and shining in its box, and the o/d of the Bolts was .135"; I was not able to identify the thread but the pitch looked coarser than say 4BA. The Bolts were steel, brass plated, with .300" dia mushroomheads and were 3/8" long. The nuts were solid brass and square, .253" A/F, the same as standard PRIMUS nuts. The holes in the lugs of the Wheel Sections, in the Hubs and in the eyes of the Wire Stays (spokes) are large enough to admit normal bolts but presumably the slightly smaller ones were supplied to allow for tolerances in the length of the Stays and so forth.

In MCS the date for this set is given as 'probably about 1920's'; in the manual and on the Wheel Sections there is Patent No. 3479-1916, which prob'ly means that the date of the patent was 1916. 'Probably' because in MJ 6 p141: 'Up to 1915 Patent numbers commenced again at No 1 each year, but from 1916 onwards numbering was continuous. Hence up to 1915 it is necessary to quote the year also.', and from the examples given the numbering in 1916 started from 100,000. Perhaps the change didn't start until part way through 1916. The set certainly existed in 1920, it is included in a list of prices (from Roger Baker) dated 23rd Feb 1920.

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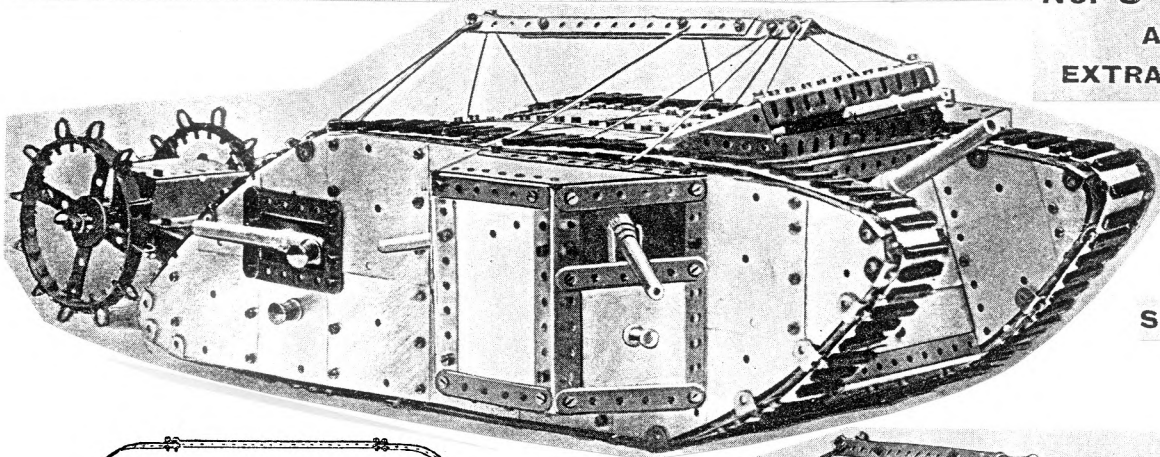
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CONTRIBUTIONS. If possible please type these, single spaced, on one side of the page only, within a width of 6 $\frac{3}{4}$ " (170mm).

"The PRIMUS" TANK

CONSTRUCTED WITH
PRIMUS ENGINEERING

CAN BE MADE
WITH
No. 5 OUTFIT
AND
EXTRA PARTS



SIDE VIEW.



Fig. 1. Side frame before shaping.

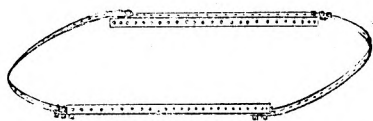


Fig. 2. Side frame after fixing Angle Bars.

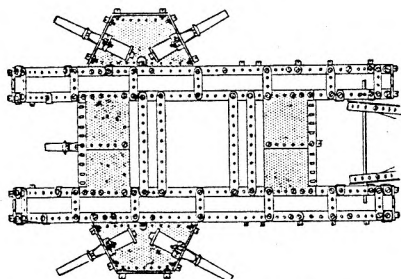
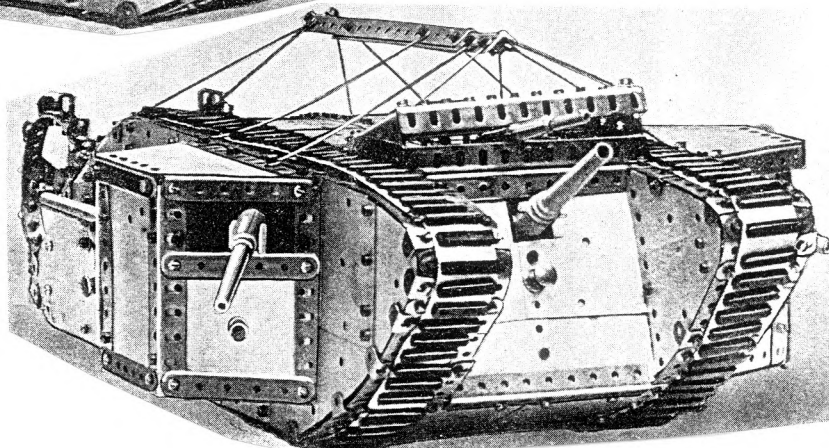


Fig. 3. Underside of Tank. Note how 3 x 3 in. plates are fixed.



FRONT VIEW.

INSTRUCTION FOR BUILDING

(1) Build the frame first, take eight 12 in. metal strips and bend them U-shape in the centre to obtain the correct angle. This is best done over a broom handle or similar rounded article.

(2) Connect up two of these bent ends with two straight 12 in. strips, so that it resembles Fig. 1.

(3) Take two of these frames, and then force in 12 in. angle bars at top and bottom as shown in Fig. 2, so that the framework assumes its correct shape.

(4) Take one of the shaped frames and connect to one of the unshaped by 2 in. strips placed at 3 in. intervals. This will give the correct shape to all frames.

(5) Then connect the framework with 3 x 3 in. plates, as shown in Fig. 3.

(6) The sides can then be filled in with 3 x 3 in. plates as photograph, or a sheet of cardboard cut to shape. If 3 x 3 in. plates are used, it will be found necessary to cut some to shape for the curved ends of the frame.

(7) Build gun turrets and then affix to sides.

(8) Now take the web band and sew it so that it fits tight on the side frame. The Tank is now complete.

This model is shown in relatively few PRIMUS manuals. It has been reduced here to .87 full size.

No.		Parts in No. 5 Outfit.	Additional Parts.
50	Screws	312	—
54	Angle bars, 8 in. ..	4	—
55	" " 12 " ..	2	2
56	Strips, 2 in. ..	16	28
58	" 3 " ..	8	10
59	" 3½ " ..	4	—
60	" 4 " ..	3	9
61	" 5½ " ..	4	2
64	" 12½ " ..	3	15
66	Brackets	78	26
68	Metal plates, 3 x 3 in. ..	14	54
76	Pulley Wheels	2	—
82	Collars	6	—
85	Buffers	4	—
96	Signal Post Rods	10	—
	Axles, 8 in. ..	—	2
	Angle bars, 4½ in. ..	—	4

2 Cut plates to form the roofs of side gun turrets, each 6d.
Web bands with wood treads ready fixed—4 ft. long, each 3s. 6d.
The model guns can be obtained from any toy shop.

THE PRIMUS TANK No. 362

ITEMS FROM LETTERS.

1. From Roger Baker: "I recently bought a K.W. MASTERBUILDER No.2 Set which was said to be complete, and I was disappointed to find that some parts were missing compared to the Contents List. On then checking I was surprised to find that there were enough parts to make each of the models shown in the manual, and when the parts were packed into the box there seemed no 'spare' holes. It turned out that other, presumably later, No.2 manuals showed contents which corresponded to my set, so there is little doubt that my manual was in error. Does anyone have an illustration showing how this set was originally laid out in its box?"

While writing can I mention the use of rubbers [erasers] for the cleaning and 'light' restoration of parts. I try to do as much of this work as possible dry to avoid using metal polish, which I find smelly, dirty and difficult to remove from inside holes. Ordinary soft pencil rubbers are good for cleaning commutators and similar copper contacts; coarser ink rubbers can be used for polishing harder plated metals. For stubborn stains the carborundum rubbers used for cleaning model railway track are excellent as they will polish nickel for instance, without taking off the plating. A bonus is that as well as removing surface rust they will polish the steel a little giving an acceptable appearance without destroying authenticity. Be careful however the coarser type can scratch the surface somewhat."

And from a later letter: "I recently bought a small clockwork motor - there were no identification marks on it but from its colours (similar to current MÄRKLIN red and green) and the small illustration in MCS, I am sure it is a No.650 MÄRKLIN MARBI. As can be seen in MCS it is slightly larger than a Magic Motor and appears more akin to a scaled down MECCANO No.1. The side plates though are the same distance apart as a No.2, even though it's non-reversing, and it's quite a powerful motor."

Two points on the TRIX article in OSN 7. I have a 2nd Edition TRICY TRIX manual dated July 1955 on the inside front cover, which seems otherwise much the same as the one described. I also own a boxed No.2161 motor with Instruction Leaflet also numbered 2161; it is similar to the 2060 in OSN 7 except that the armature is shrouded. It's in a gold colour with green field coil poles." [This confirms the layout of the 2161 given in OSN 4/52.]

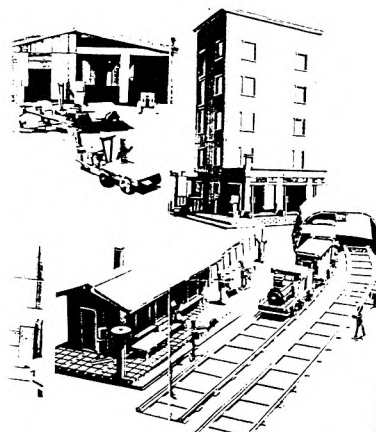
2. Ed Barclay noted that the PRIMUS Gear Wheel he owns has 59 teeth, an unusual (prime) number, but useful to give a $29\frac{1}{2}:1$ ratio for moon phases of clocks. Also that the teeth are cut like those used in clocks. [W.Butcher & Sons who made PRIMUS were camera makers but didn't make clocks so far as is known. Of 4 Gears to hand, 3 have 56 teeth and one, which came with some CHASSIS parts has 59. Its o/d is the same as the others.]

3. From Peter Kessler: "According to David Grey of Capetown JEP is no longer on the market, a pity, the Army set was just that much better than the Liverpool or French versions."

4. Valerie Young wrote that at one time LYNX Sets were made near her at Woburn Sands and the Instruction Leaflet for a 1A Set she owns bears the legend: 'Sole Manufacturers, The Bay Manufacturing Company, Station Road, Woburn Sands, Nr. Bletchley, Bucks, England. Also of Morecombe, Lancs., and Glasgow.' Valerie also sent some details of a CONSTRUCTO set (called PLEASURE BEACH in MCS), which I hope to include in the next Issue, and mentioned that she once saw an electrical set of the same brand, and it contained a coil among the other parts.

5. From Thomas Keel via Peter Kessler, photocopies of a Swiss TECTO brochure, from the 1940s perhaps, showing Sets A to F, and about 50 wooden parts with tongue and groove joints. Attractive looking models but as space is short just the much reduced illustration right; if you would like more details please ask.

6. Don Redmond sent a correction to his Sector Plate Classification in OSN 8/158. Under B.3(a) Premier is misspelt, and under Aluminium '6x5' needs to be inserted between 'A.2(a)' and 'holes'. And speaking of some STRUCTOMODE parts found in a mixed lot he says: "Pairs of 5.5 and 12.5in. characteristic Braced Girders were what enabled me to recognise it; other recognition features are the large radius strip ends, and for DAS, the end (bent tip) holes are very close to the ends of the strip. Also included were green painted aluminium plates 8.5x 4.375in., with edges raised 1/8in., and two slots 1/2in. long at one end with two little bent tabs at the other. These it is said, are bridge deck panels although no such part is shown in MCS."



7. Derek Moore recalls Matchbox Sets being sold by Woolworths in 1938 when he was 12. His recollection is of the parts being held together by 'wheels' pushed on dowels of about 1/8" dia. The overall size of the box was a probably a little larger all round than a normal, small matchbox. He also remembers

seeing similar sets on sale in Edgware in the 1950s, "but alas, in view of my present interests, I did not buy one." Derek also sent a fine sketch of a solid wood Aeroplane Kit sold by Woolworths at about the same time. The various parts, fuselage, wings, struts, etc, pushed into one another; the wing span was perhaps 8 or 9". I can send a p/c of it to anyone interested.

8. From Dennis Higginson: (a) There are at least 3 varieties of PRIMUS Buffers. The head of the type illustrated in MCS is a disc of constant thickness, the second sort is similar but the outer face of the disc is distinctly conical. The third sort is in two pieces with the head, a $\frac{1}{4}$ " shank and a 1" threaded tail as one part, with a pressed body screwing onto it. The conical outer face of the head is slightly rounded but with a flat in the centre. (b) During the mid 80s the ERECTOR range from the Ideal Toy Co Ltd of Woodley, Berks consisted of the 200, 375, 500 and 725 Outfits plus some sets to make single models. Dennis has 3 of the latter to make an Alien Terrain Patrol, a Bi-Tread Defence Tank, and a Mega-Claw Excavator; he wonders whether there were any more in the series.

MORE THREADS. Following the piece in OSN 7/168, Dennis Higginson sent some data which came from an unnamed technical publication of probably the 1940s. Much of it confirms what was in OSN 7 but there are also the following:

- For the 3/32" US Form, 48tpi is given as well as the 56 and 60 already noted.
- No mention is made of ANC or ANF threads but details of an A.S.M.E. series are given. This uses a similar notation to ANC/F and as well as all the combinations of diameter and tpi given for those series there are: 4-32, 5-36, 6-36, 7-30, 7-32, 7-36, 8-30, 8-40, 9-24, 9-30, 9-32, 10-28, 10-30, 12-32. All the diameters correspond exactly to the ANC/F ones and those for the 7 and 9 sizes are .151" and .177" respectively. The A.S.M.E. dia for #14 is .242" and no doubt the ANC/F dimension (not given in OSN 7) is the same.

Also Gaston Marette sent details (below) from an old technical manual, of an obsolete series of Belgian threads which are unusual in that the diameter is given in mm and the pitch as tpi; the Angle is not mentioned.

Thread No.	16	17	18	19	20	21	22	23	24
Diameter, mm	2.4	2.7	3.0	3.5	4.0	4.6	5.2	5.9	6.6
tpi	48	40	40	32	26	26	24	20	20

EXTRA MCS SHEETS. The Sheets listed below are available at 15p per Sheet plus postage.

HAO WANG: X1.1,2,3/4/6,5. [2 Sheets]	STABA(2): X1.1/2a,3/4-b,5-a,6. [4 Sheets]
KITANO: X1.1,2,3/4/6,5. [2 Sheet]	TECC: X2.2a/5a,3a/4b/6a,7a. [2 Sheets]
MASTERBUILDER: X1.1,2a,3/4a,5a,6. [3 Sheets]	TRANC MADERA: X1.1,2,4/6,5. [2 Sheets]
MODELIT: X1.1. [1 Sheet]	WALTHER'S INGENIEUR: X1.1,2,3/4/6,5. [2 Sheets]
GILBERT NEW WHEEL TOY: X1.1,2,3,4,5-a,7-a. [4 Sheets]	

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CONTRIBUTIONS. If possible please type these, single spaced, on one side of the page only, within a width of $6\frac{1}{2}$ " (165mm). If available please use letter spacing of 15cpi.

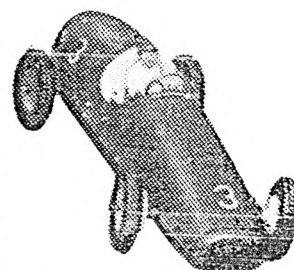
- The Plates are .021" thick with very slightly rounded corners; they are accurately made and the paint finish is very good. There are one or two sharp edges on the corners though.
- 3 lengths of Bolts were used, 3/16" (shorter than the standard ERECTOR 1/4"), 1/2" and 7/8"; round heads are shown and square Nuts.
- The 2" dia Wheel is in two parts, the outer Tyre which pushes onto a Hub. The latter is a push-fit on a standard ERECTOR Axle and its outer edge is shaped to fit within the centre of the Track. Said Track comes in sections about 5 1/4" long which clip into one another to make different lengths for the different models. The treads are 15/16" wide and are connected one to the next by two thin plastic 'strips', each about 5/32" wide, to give flexibility; there are 11 treads in each section.
- The MV metal parts are painted olive green, the plastic Hub is a similar colour and the Tyre and Track are black. An ad says that RBE parts are yellow and black. The photo of Ed's truck model shows black, red and yellow Plates, yellow Hubs, red Fenders, and a blue (I think) front grille panel.

With more information new MCS Sheets could show Set Contents and Illustrated Parts, so if anyone has any such data please get in touch - copies of the Instructions for the C&T and RBE would be a great help. Meantime the reduced drawings from the MV Leaflet on the previous page show some of the parts.

AMENDMENTS TO MCS (as necessary, depending on version) HOLE DIAMETER: 4.7mm. HOLE SPACING: 5/8" (15.9mm) between holes in rows 5/16" (7.9mm) apart. SETS: Military Vehicles; Car and Trucks; Road Building Equipment (this is called Road Construction in the Sears ad shown later); probably a motorised Road Building Set. PARTS: About 80, over half of which are plastic. COLOUR: Olive green for Military Vehicles; red, yellow, black for the other Sets. MOTORS: Probably electric in the motorised Road Building Set. PERIOD: Known 1964 to at least 1967. COMMENTS: Very few standard ERECTOR parts were used in these sets.

AMENDMENTS TO INDEX IN OSN 6: THREAD: 8-32. SPCE: 15.9x. dST: 4.7* DAXL: 4.

A BRAL FERRARI. Geoff Wright showed me a BRAL products Leaflet which included a constructional set for a Ferrari racing car. There is a small picture of the finished car (right), and one of the Set itself which will be included in an Extra MCS Sheet. The box lid has Auto Gran Prix on it, but no mention of BRAL. The blurb says that the Set contains steel and cast aluminium parts to make a scale Ferrari Racing Car powered by a 3 volt motor. The Set can be seen to contain a chassis, wheels with separate tyres, upper and lower body units, a 3 spoke steering wheel, the driver, and a small, cylindrical motor. No other mechanical detail is clear but there's a part which might be a gearwheel, and others which might be steering gear components. What appear to be 2 Screwdrivers, one large and one small, can be seen. There is no positive indication of date on the Leaflet but also included are the old style Aero Sets which were still advertised in an early 1970s products Leaflet which didn't include the Car, while said car looks like late 50s to this non expert.



AMENDMENTS TO INDEX IN OSN 6: NAME: BRAL RACING CAR. TYPE: CR. CY: IT. SPCE: VAR.

PRIMUS PRICES. My thanks to all those who sent information. The idea was to try to see if anything could be gleaned on dates of introduction and demise of the various sets. The lowest prices were 6/- to 45/- for Sets 1-5, slightly lower than those in the Jan 1917 ad (5/88) for 5 unspecified Sets (7/6 to 50/-), and so probably slightly earlier, given that prices generally rose throughout WW1. So it is fairly certain that the 1917 ad referred to Sets 1-5, and either Set 6 had not been introduced at that time or it wasn't available due to the war. The fact that in the earlier list there was no mention of it makes it more likely that it wasn't on the market until sometime after the start of 1917.

The next fixed point is a Manual stamped with 'revised 2/20 prices': 7/6 for a No.0 set, 10/6 to 105/- for 1-5, and 210/- for a No.6. Also 17/6 for a Big Wheel Set (BW). The original prices in this Manual were 10/6 to 168/- for Sets 1-6, no mention of #0 or BW. Probably the date of this Manual was 1918-19 because in another, Sets 1 to 6 are given as 8/6 to 105/- (actually £5.5.0 but I'll put everything into shillings for convenience), and so this fits between the 1917 ad and the '1918-19' in terms of prices and range of Sets. So call this one 1917-18 and some confirmation of this is that it's the only one seen that shows the model Tank: tanks had been introduced in 1916 and were no doubt a popular subject for toys soon afterwards.

So that puts the #6 around 1917-18, and the #0 and BW around 1919 to early 1920. After that nothing but a page from a Bassett-Lowke catalogue thought to be 1926 or shortly after, that shows the BW, Motor Chassis and Locomotive Outfits, and the postage for Sets 1-6, but no mention of #0. The postage is also given for a PRIMUS Outfit referred to as 'Wood Parts'.

Another Set that I've never seen mentioned anywhere is the 'JUNIOR ENGINEER'S OUTFIT, complete with 32 different parts'. That's on the front of the 8x10½" envelope it was packed in, together with a boy and 12 not very exciting models, and 'Price One Shilling'. The parts in my Set are a Flanged Wheel, 4 x 2" Strips, 2 Catches (#95), a Trunnion, 4 x Posts (#11), 1 Signal Post Rod (#96), 3 Wire Stays (#155), 2 Collars, 2 Axles (#78), and 6 N&B. This little Set probably came quite late in the PRIMUS era, the Flanged Wheel has only 4 holes in its face instead of the 8 shown in all the manuals I've seen, and its boss is (single) tapped 5/32" BSW, whereas most 4 (and all 8) holers have a smaller diameter Set Screw with a non-standard thread: one I've just checked is .102" o/d and about 40 tpi.

If anything comes your way that adds to any of the above, please send details.

STOKYS CITY. This system is well covered in MCS but a little more can be added from a Manual and some of the parts that Dennis Higginson kindly sent recently. There are 2 City Sets and basically the system consists of aluminium wall panels and hardboard roof panels, held together by a selection of brackets. The holes in the Panel, as in STOKYS Strips etc, are 4.1mm dia, and their pitch is in multiples of ½". All the designs on the Panels, windows, railings, clock, and so on, are painted on, and there are no cutouts in any of them. And all but the window panels #601 and 602, have designs on only one side, and so may be used with the plain face outside or upwards - the Balcony Railings, #625-7, for instance are used in this way as loading ramps. (In MCS #601 looks as if it is double height like #602, but what is shown is meant to be the two sides of a square Panel: in Dennis's Manual there is a clear space between them.)

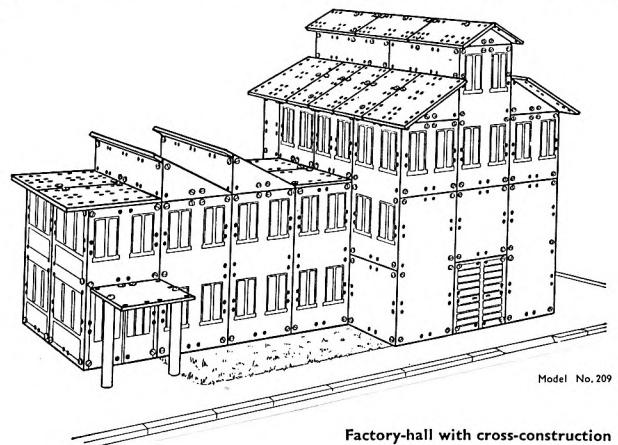
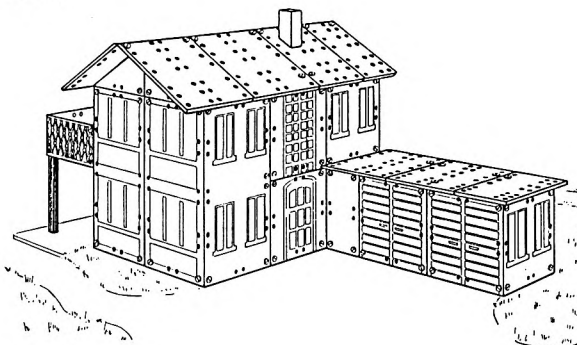
The wall panels are nominally 4" wide, Panel 602 actually measures 3.97x7.94", and are .024-.026" thick. They are silver on both sides with blue-green window panes, and the window frames and other details are dark grey. Balcony railings are 2" deep and no floor is provided for the normal 2" wide balcony: it is suggested that cardboard be used. The smooth faces of the hardboard roof panels, #631-3, are red and they measure 2½x5", 4x4" and 4x5" respectively. The Columns, #661, and the Chimney, are wood painted grey and they are held in place by the Wood Screws 100H.

The panels are normally butted together, and are held by 2 and 4-hole flat Joint Plates and Angle Brackets with slotted holes; angled versions of the latter are used with the roof panels and there are also 11-hole obtuse A/Gs in the larger Set. The Manual shows a good selection of 20 modern, rather undistinguished, looking buildings - houses, flats, factories, a church, etc; the tallest, of 6 storeys, would be about 24" high. I looked in vain for the Swiss chalet of my school geography book, though it could be done with the parts I think, the pitch of the roof is about right. How would the models look? Quite smart probably but I've two reservations: first the flat window and door panels might appear rather 2-dimensional, especially when used in small houses; secondly, there are only enough Brackets provided to put one at the top and bottom of each wall panel and this might leave unsightly gaps half way down, particularly with the 8" ones, unless they were perfectly flat.

AMENDMENTS TO MCS (as necessary, depending on version) HOLE DIAMETER: 4.1mm. HOLE SPACING: Multiples of 12.7mm, usually ½" or 1½". COLOUR: Silver with red roof panels; windows blue-green, details grey. PERIOD: 1950s to 1960s [from MCS/FB]. COMMENTS: Wall panel are painted aluminium with no cutouts for windows etc; roof panels are hardboard. The Chimney and Columns are of wood.

AMENDMENTS TO INDEX IN OSN 6: dST: 4.1mm.

SUMMARY OF MANUAL. #Name: STOKYS-City. #Details of maker: Gebr. Stockmann AG, Luzern. #Dates &/or Ref Nos: No.1600 on FC. 1.Auflage on IFC. #Page size: 225x155mm deep. #No of pages: 40 plus covers. #Language: German, French, English. #Printing: Line drawings, black on light orange inc covers. #Page No of Illustrated Parts & highest PN: IBC,675. #Page Nos of Parts List/Set Contents & highest PN: BC,675. #Sets covered: 1,2. #No of models for each set: 10,10. #Name, Model No, Page No of first & last model of each set: 1:Villa with garage,2,101; Apartment-house with cross construction, 20,110. 2:Scyscraper,22,201; 3-aisle housing-block with roof-constructions,40,210. #Other notes: none.



Model No. 209

Factory-hall with cross-construction

manual, and that didn't include any Elastoplast that might have been needed when cutting those 12 or so pieces of old glass.

SUMMARY OF MANUAL. #Name: The AMERICAN MODEL BUILDER Details of maker: The American Mechanical Toy Co., Dayton, Ohio, U.S.A. #Dates &/or Ref Nos: Patent 1913 on FC, Copyright 1914 on p1, ref to a closing date of April 1915 on p2. #Page size: 265x170mm deep #No of pages: 80 plus covers #Language: English #Printing: Cover as in MCS with pale green background, brown detail and name in red letters. Models are line drawings. #Page No of Parts List & highest PN: 79,62 #Page No of Set Contents & highest PN: 77, no PN #Sets covered: 1-7 #No of models for each set: 1,15;2,12;3,13; 4, 3; 5,8;6,10;7,12. #Name, Model No, Page No of first & last model of each set: 1: REVOLVING CRANE,1,4; LATHE,25,11. 2: REVOLVING DERRICK,40,12; ENDLESS ROPE RAILWAY, 51, 16. 3: SCHOONER,60,17; PLATFORM DERRICK,72,23. 4: SWINGING BRIDGE,80,24; GAS ENGINE,92,32. 5: AERIAL SWING,100,25; LATHE,107, 38. 6: MERRY-GO-ROUND,120, 39; TRAVELING ROTARY CRANE "Panama Type",129,49. 7: LONDON TOWER BRIDGE,140,50; CYLINDER PRESS,151,68. #Other notes: The 26 letters of the alphabet are shown for Outfit No.1 on p3, and 8 examples of Mechanical Construction on pp72-76: the first is SIMPLE BRACING and the last, GEAR TRAIN.

Notes on other Manuals In case anyone can positively identify them some

details are given for the incomplete manuals referred to above.

'1912' Pages 3-4 contain Models 1-6, Revolving Crane to Folding Chair, for Outfit No.1.'

'1913' Set 1: p7, No.24, Aerial Water Tower, and 25, Lathe. Set 2: pp8-10, 7 models, 40, Revolving Derrick, to 44, Railroad Gates. Set 3: pp11-13, 4 models, 72, Platform Derrick to 60, Schooner. Set 4: pp14-16, 5 models, 81, Titan Crane to 92, Gas Engine. Set 5: pp 17-18, 3 models, 104, Engine and Tender, to 107, Turning Lathe. Set 6: pp19-21, 3 models, 123, Machine Shop, to 129, Traveling Rotary Crane "Panama Type". Set 7: pp22-25, 3 models, 148, Coal Hoist, to 144, Observation Tower. p25 shows Transformers 400 and 425, and the Geared Countershaft, No.350.

'early 1915' Set 1: pp7-11, No.135, Lathe, to No.173, Platform Derrick. (no Models 161-164) Set 2: pp12-16, 174, Deep Well Pump, to 221, Hulett Ore-Unloader. Set 3: pp17-20, 239, Lamp, to 271, Counter Scales. (no Models 257-263) Set 4: pp21-27, 272, Barge Dredge, to 314, Zeppelin. (no models 297-306) Set 5: pp28-31, 322, Punching Press, to 336, Battleship. Set 6: pp32-35, 346, Electric Railway, to 352, Stationary Engine. (no Models 347-348) Set 7: pp36-41, 364, Library Lamp, to 370, Old Dutch Windmill. (no Model 367) The Illustrated Parts on p41 are exactly as MCS/FB p4.

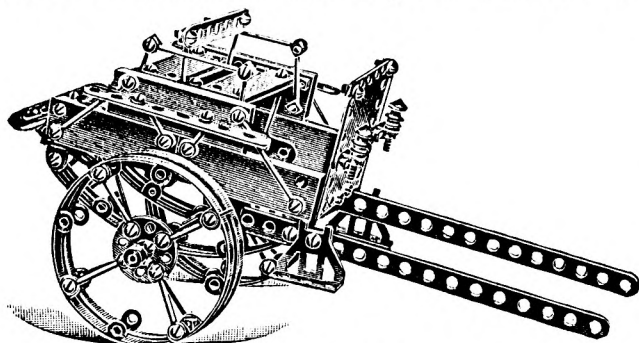
'late 1915' The title page has some fanciful floral artwork at each side and the slogan in the '1914,' 'Makes Mechanics Easy', has been replaced by 'Educational and Highly Entertaining'. The illustrations and list of parts on pp 78-79 are exactly as in MCS/FB except for the change to Part 33. Likewise the set contents.

PRIMUS AND THE BIG WHEEL OUTFIT Below a note from David Hobson as a follow up to 9/230.

A Price List dated March 1st 1918 has turned up and this provides another step in dating the development of the system. It was with a Manual which shows the model WW1 Tank, and which has the price range 8/6 to 105/- for sets 1 to 6 - the same as the 'Tank Manual' referred to in OSN 9. However the prices were over stamped 'Prices Advanced'. Both items were in a 3S set marked '21/-' on the lid, the price shown in the 1918 List.

This confirms that the 'Tank Manual' is almost certainly between 1917 and early 1918, and that the No.6 set must have been introduced by the time the 'Tank Manual' appeared. The No.0 set is not mentioned in this manual but it is priced at 7/- in the 1918 List and so must have been introduced at sometime between the two. The List also includes the supplementary sets 1S to 3S (at 9/6 to 21/-) but not the 4S. [The 4S was listed in the manual referred to in OSN 9 as the 1918-19, the one with the revised 2/20 prices in it. All the original prices, including the 4S, fit between those of the 1918 List and the 2/20 ones. In that case it might be expected that the No.0 set would be listed in the 1918-19 but it isn't, it's only in the 2/20 prices.]

In the 1918 List the Big Wheel outfit - 'a topping way to build wheels' - is introduced as 'The Great Addition for 1918', price 15/-. An attractive model Dog Cart is shown which

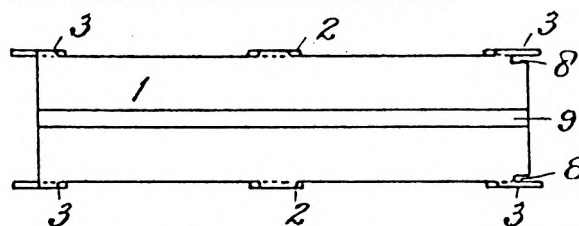


No. 1000. Dog Cart.

uses the Wheel Sections as springs, as well as for the

wheels. The Patent No. 3479-16 shown in the List, and also as 3479/1916 on the actual Wheel Sections (see 6/139), is an Application No., not the Patent No. It is dated March 8, 1916 and the actual British Patent No. is 100385, to W. Butcher & Sons, and A.J. Jones, May 11, 1916. Manufacturers sometimes seem to have been keen to quote the Application No. rather than simply stating 'Patent Pending', if they went ahead before the Application was approved and the final Patent No. assigned. However, this does not seem to have been the reason in the present case, because there was a 2 year delay before the product was marketed.

A point of interest is that the Patent drawing shows a simple disc hub, while the actual wheels had bushed disc hubs. Another difference is that the Wheel Section in the Patent had two slots (8, below) at one end to accommodate the 'ears' of the next Section; these were not necessary in the final design because the ears at one end were set slightly wider so that those at the other end could slide inside.



For connoisseurs of big wheels, comparison can be made with the MECCANO part 119, 'Large Wheel Segment', introduced 5 years later in 1923, which gave an 11½" dia wheel, ½" wide, and the 1926 ERECTOR part CS, 1" wide Wheel Segment, of similar radius. The PRIMUS wheel was ¾" in width, and the maximum diameter using the spokes supplied in the Set was 8". However a 12" wheel could be made using part 96, Signal Post Rod, as spokes, and the Model 1024, Laxey Wheel, in the Big Wheel manual, includes such a wheel, though with no instructions for making it.

MCS ENTRY David's note is a good opportunity to update the MCS data page, and an Extra sheet has also been prepared showing the manual covers, the Set Contents, and more details of the wheels' construction.

ITEMS FROM LETTERS

1. From Kendrick Bisset: A photo of a **JUNIOR MECHANIC** No.101 Set (see 13/361), courtesy of George Wetzel. The lid is similar to the that of the 201 described in 12/327, but the 6 models on it are different. The packaging and parts, including Strips with chamfered corners, look the same as those of the 201. The Set appears to be complete and the main parts are 2,4,6 of 16,8,4h Strips; 6 Angle Brackets; 4 Wheels; 2 & 1 of the 2h & 8h long Flanged Plates; and 1 Crank Handle. The interesting thing is that



there's a manual with the Set. It covers both the 101 & 201 sets and the cover (opposite) scales at 8 $\frac{3}{4}$ " wide. The top half is blue with white lettering; the bottom half is white with Manual of Instructions and the maker's name and address in blue.



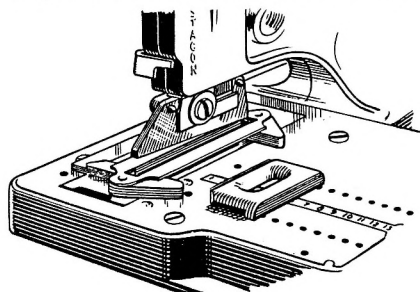
2. From David Hobson. • The **GILBERT NEW WHEEL TOY** was available in Britain well before 1921 (see 13/360): it is the subject of full page Gilbert ads in the Dec. 1919 and March 1920 Boys' Own Paper. [3 sets were mentioned, at £1.19.6, £3.7.6, & £5.5.0. The middle outfit had 'gears and pinions', and the largest 'also makes a small sleigh and racer with runners'. The model left, one of 3 shown, isn't in the manual summarised in 8/199. Both ads contained a coupon which was to be sent to Mr. A. C. Gilbert

(Dept.27), 125, High Holborn, London, W.C.1.]

• The **MANUFAX** Sets 0-4 were advertised (by B&T) before the Sept.1932 date given in 7/155. They are in an Oct.1931 BOP ad at the prices given in OSN 7. It's odd because this ad predates the Dec.1931 Supplement ad which lists only the Nos.1 & 2 outfits.

• A Nov.1956 ad from Claude Rye Ltd. (in the Children's Newspaper) probably marks the end of **JUNEERO** in the UK. It offers Sets 0, 1A & 2A at less than half price, with a further reduction for large quantities. No doubt the manufacturer's stock was being sold off. **JUNEERO** was on sale in Holland in 1962, see 14/395.

• An article in the October 1920 *The Toyshop & Fancy Goods Journal* advises that the **PRIMUS** Motor Chassis Outfit, and an Electric Motor for use with the standard sets, would be available before Xmas. **PRIMUS** vertical Steam Engines to drive models are also mentioned.



• A Guillotine attachment (left) for the **PRESTACON** Tool (9/217) was advertised in *The Toy Trader & Exporter* for July 1948, by L.Rees & Co. Ltd - a *Cyldon* Product. The claim was that it would

cut the $\frac{1}{2}$, 1, & 2" Strips into any length from $\frac{3}{4}$ to 12".

• A system called **DORFAN**, or DUFAN, was in an MCS lists of possibles: nothing definite is known of a normal constructional set of that name but in *The Toy Trader* of April 1927 there's an ad for a constructional electric railway engine called the **DORFAN** Loco-BUILDER. From the illustration, the motor and gearing had to be assembled and fitted to a body made up of 2 pressed sides joined together. The name on the box is The Dorfman Co., Newark, NJ, and there's NYC 51 on the sides of the loco.

• In the July 1921 issue of *The Toyshop & Fancy Goods Journal*, a review of the range sold by the toy factor Bedington, Liddiatt & Co. included **PYFYL** (see 14/365) as a new constructional toy.

Some of the 30 or so relevant trade marks shown in *Toys & Automata Marks & Labels* by Gwen White, are of interest, and for each a name and date (of registration presumably) are given.

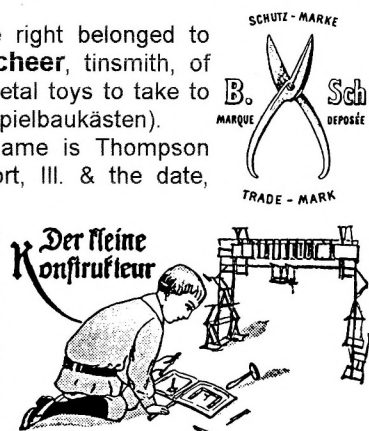
• For **BANGAROO** (see 9/235) they are Alfred James Bartlett of Gloucester, and 1908 (although a later entry shows 1922). The toy is described as 'detached pieces to join together'.

• The 1900 mark to the right belonged to **Bernhard Karl Emil Scheer**, tinsmith, of Burgstädt, and was for 'metal toys to take to pieces' (Zerlegbare Metallspielbaukästen).

• For **STRUCTO** the name is Thompson Manufacturing Co, Freeport, Ill. & the date, 1912.

• The illustration opposite is that of **DER KLEINE KONSTRUKTEUR**, by Hermann Tietz of Berlin, in 1913. No indication is given of the material used. The name was used again in the 1950s, see 12/313.

• **HAPPYNAK** (4/72 & later in MCS) is from The Matchless Metal Polish Co, Old Swan, Liverpool in 1915 - not the name in MCS but both were at Old Swan.



3. Richard Symonds sent a photo of a **CONSTRUCT-O-CRAFT** Model 100 set, which is packed in a tube with a screw top, 3 $\frac{1}{8}$ " Ø by 9 $\frac{5}{8}$ " long. The main point of interest is the 'Manufactured exclusively by Hedge Tool & Mfg. Co.' on the tube. The only address is Chicago, which is also that of the Boxar Tool & Mfg. Co., the maker given in MCS. Hedge came after Boxar because a Boxar manual, like the one the MCS material came from, is © 1946, and this tube carries © 1948 HT&MC. The photo of the boy and model shown on the tube is identical to the one on the Boxar manual. There was no manual in the tube; the few remaining parts in it are the same as those in a #500 Boxar set. Were the two companies one and the same with just a change of name? In case anyone wants a starting point, Boxar's full address in the manual is 2240 W. Ogden Ave., Chicago 12.

4. Thomas Morzinck wrote that **eb**s metal construction sets are being made in The Czech Republic for the German company **Ebert & Schön** of Munich, and are sold only by the firm Manufactum, of Marl (near Essen). A leaflet gives a few details - the parts are said to be 50% larger than those of comparable outfits, and all metal ones are nickeled. 8 small sets are available, each making one simple model - a Windmill, Carousel, Biplane, Cross Country Car, Fire Engine, Big Wheel, Tractor & Trailer, and Timber Lorry. The latter is over 70cm long with Road Wheels that look in proportion. A larger outfit with 228 parts makes a nice looking Wind Turbine, apparently driven by clockwork. There's a blurry photo, that won't reproduce, of each model. The address given for further information is Handelskontor Ebert, Aidenbacher Strasse 108, 81379 München, phone/fax 089 788111/788118. This sounds as if it's the same as the E.B.S. mentioned in 17/491.

5. Roger Baker sent a photo of an unused No.3 **MAC ET NICK** set. The lid is covered by a colourful picture of a man & a boy behind a large model Submarine, with a Crane in the background. The 'blueprint' with the set (in French) looks about the same size as the one described in OSN 17 but is in portrait format, and the 10 models on it are different with a Monoplane top right and a Warship bottom left.

6. From Michael Grace: • 'On the **MÄRKLIN Robot** Set from a few years ago, I found it rather 'fiddly' to make up - some of the clearances were tight and there was a good deal of play in the various movements. Overall it was a bit

The No.0 in the first manual has 75 N&B, and in size it is somewhere between the 00 and 0 in the second.

Other manuals must exist because although the MCS models are in one or other Mans.1 & 2, their page numbers and layout are not identical. Richard also sent the Illustrated Parts from another manual which is the same as the one in Man 2, but also shows separately the earlier illustrations of the Lead Screw & Saddle, the 4-Spoke Pulley, and the Screw-driver with the wooden handle.

There are 4 other smallish Hungarian systems in MCS which together with TECHNOKID, have certain parts, & in some cases, models, with a similar look to them. Of the two general purpose sets MECHANIKA has the widest range of parts, with conventional, rounded-cornered Plates and Strips, though the former are 4 holes wide. FÉMÉPÍTŐ appears to be similar but with fewer parts. Another, METAPLAN, is the largest with over 60 parts, and many of them, all square-cornered, are obviously intended to allow the Loco & Carriage shown in MCS to look as realistic as possible. The last is KIS TECHNIKUS, and the manual cover in MCS shows the Railcar & a manual lying on a table with the name TECHNOKID on it. So it may be the same as, or closely related to, TECHNOKID. Actual MECHANIKA parts are plain aluminium like those of TECHNOKID, and probably those of the other three systems are too.



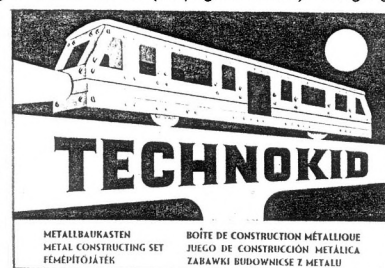
SUMMARY OF MANUAL

[Man1] •Name: TECHNOKID 0-1 •Details of maker: MEJA, MAGYAR GYÁRTMÁNY, GYÁRTJA A, BUDAPESTI VT. MECHANIKAI JÁTEKGYÁRA, BUDAPEST XX, SÁGVÁRI ENDRE-U. 24. •Dates &/or Ref Nos: F k.: Mosányi Pál - 27263/LD05 - Révai, Budapest (F. v.: Nyáry Dezső) •Page size: 246*166mm deep. •No.

of pages: 44 + covers. •Language: Hungarian. •Printing: Colour cover (black, yellow, dark blue, grey, red train); B&W photos of models on red framed white pages. •Page No. of Illustrated Parts & highest PN: 4,75. •Page No. of Set Contents & highest PN: 5,75. •Sets covered: 0.1. •No. of models for each set: 16,13, & 22 for #1+extra parts. •Name, Model No., Page No. of first & last model of each set: 0: BORONA [CLOD-CRUSHER],1,8; BORONA [HARROW],16,13. 1: FELVONÓ [LIFT],17,14; DIESEL-MOTOROS GYORSVASÚT [DIESELMOTOR TRAIN],29,25. 1+: KONYHAMÉRLEG [KITCHEN SCALES],30,26; KÖRHINTA [MERRY-GO-ROUND],51,44. •Other notes. The English names above are from the English edition. The words on its cover are in Spanish - Caja de construcción metálica on the front. The maker's name on the back of the Hungarian version is replaced by ARTEX, SOCIEDAD HÚNGARA PARA LA EXPORTACIÓN E IMPORTACIÓN, BUDAPEST 5.P.B.45. The PR is Publ : C. Kovács - 26111/LD05-Révai, Budapest (Resp. : D. Nyáry).

SUMMARY OF MANUAL [Man2] •Name: TECHNOKID •Details of maker: TECHNOKID, Budapest, Hongrie. •Dates &/or Ref Nos: 'Felelős kiadó: Bokor Jenő igazgató', & '63.3254 Egyetemi Nyomda, Budapest', on back cover. •Page size: 201*136mm deep. •No. of pages: 92 inc covers (no page numbers). •Language:

German, French, English, Spanish, Hungarian, Polish. •Printing: Colour covers (black, yellow, fawn, red train); B&W photos of models on white pages, partially pink or blue. •Page No. of Illustrated Parts & highest PN: 20,151. •Page Nos. of Set Contents & highest PN: 21, 151. •Sets covered: 00,0,1. •No. of models for each set: 37,16,55. •Name, Model No., Page No. of first & last model of each set: 00: TRAFFIC SINGS,1,32; LORRY,37,50. 0: BED,38,51; DUMPINGWAGON,53,59. 1: WHEEL BARROW, 54,60; DIESEL RAILCAR,108,90. •Other notes. The parts pages and model names are repeated in all languages. The models that can be made with each set are not stated and have been judged from the parts needed to make each model.



PUBLICATIONS

Ward's Catalog Erector, 1913-85 I haven't seen this 118 page, spiral-bound book by Marshall McKusik, but Don Redmond writes that it is very good, with a coloured cover showing two of the Duplex Standard Sets and a version of the White Truck, and a whole chapter on these Sets. (Duplex sets were made by Gilbert for the various stores and, instead of Girders, contained Strips with alternate normal & large diameter holes. Ward's sold TRUMODEL & STEEL-TECH Duplex sets.) The reproduction from the catalogues is much better than in the Sears volume (see 15/425), having been taken from the paper originals rather than microfilm. Also included is an article about the alleged connection between Gilbert and Meccano, including full details of the latter's legal action against AMERICAN MODEL BUILDER. It is available from Ashton House Press, 820 Park Road, Iowa City, IA 52246-2427, U.S.A., price \$28 including (US?) postage.

PRIMUS ENGINEERING This book by David Hobson is the result of much careful research into the PRIMUS system and the firm who made it, and though there are still some gaps because the appropriate records have disappeared over the years, it is a very thorough account of a unique system. Do you know where you can still see the full-size prototype of the PRIMUS Architrave? Did you know that a offshoot of the firm that made PRIMUS is still trading in Blackheath? Did you know that there are 8 known varieties of the Flanged Wheel? As well as all that there are the background topics which are mentioned in David's ad opposite, and some of them I found interesting in their own right, particularly the discussion of the validity of Hornby's 1901 patent claim in the light of the relevant patents that had preceded it. There is a lot of information in this book and, as seems to be the fashion these days, there is no Index, so I made up a skeleton one for myself as I read through the first time and have since found it invaluable.

The MERKUR Geared Motor This is the one that was mentioned in 17/485, and I finally got to use it in a model recently. In doing so I discovered that the fore & aft movement in the output shaft, which I had assumed was just due to poor assembly, is probably intentional. When the shaft is at one extreme position it runs at the 170rpm of OSN 17, but at the opposite extreme, a movement of 2mm or so, a different internal gear is engaged and the speed is increased by a factor of about 5. Depending on which speed is to be used a Collar may be needed on the end of the shaft that isn't carrying the output wheel. I can't find any indication of a 2-speed capability on the Leaflet which was with the Motor or the box it was packed in.

SMALL ADS

WANTED. The PRESTACON Jeep Kit, shown in OSN 17, p490. Don Redmond, 9 St Catherine Street, Kingston, Ontario, K7K 3R9, Canada.

FOR SALE at cost of production. Privately produced book "PRIMUS ENGINEERING - An Early Competitor for Meccano". Describes the history and details of the Primus Engineering system. Also includes information on the development of metal constructional toys in the late 19th century, and the position which Primus and other early rival systems (there seem to have been more than 20) occupied in relation to Meccano through to the mid-1920s. A4 size with 100 sides of text and tables, together with 111 sides of black and white illustrations, and 8 sides of colour copying showing 32 photos. Comb-bound with acetate covers, weight about 1kg. Price £19, plus post and packing: total in UK total £23; in Europe £24; in USA \$46 airmail, or \$38 surface (no credit card facility but can utilise US dollar currency). David Hobson, 'Woodington', Edford Green, Holcombe, Bath, BA3 5DB, England.

RAILWAY OUTFITS

STABIL Serie: Spezialbaukasten für Eisenbahnwagenbau Despite the fact that the Hornby's 1901 patent showed railway track and a crane on rails, there was never any particular emphasis on railway models in MME & MECCANO manuals. Rather surprising perhaps, given that by repute, every young boy's dream at the time was to become an engine driver. Walther on the other hand introduced a series of sets well before WW1, that allowed various goods wagons to be made. What follows is mainly based on a photocopy of a manual, courtesy Ansgar Henze, kindly sent, with some notes on the parts, by Werner Sticht.

The earliest known mention of the Railway sets is in the c1911 catalogue described in 22/650, and it contains an illustration (left) of one model. It isn't among those in the manual and it doesn't have the buffers that are fitted to the Manual models. The wheels are 1 hole lower

in relation to the main chassis too.

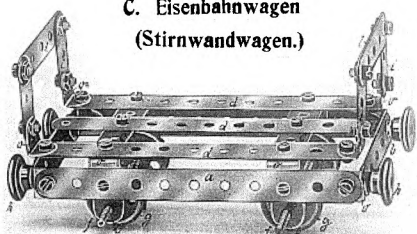
A 1914 catalogue lists 5 sets (Nos.59-63, see 13/348), plus linking sets 59a-62a. 6 models are shown and all are exactly as in the Manual. Sets 59 - 62 are illustrated and the No.62 is shown left. All the sets have one chassis already made up and the No.62 contained enough parts to make 7 Wagons at the same time.

The Manual has 16 pages (241*170mm deep), plus covers, and 3 extra pages (showing Models W & X, small illustrations of some non-railway models, and a Price List) have been glued in at the back. The cover is the type at the top of 13/350, with Vorlageheft zu No.59 stamped on in purple ink at the top, and the name 'Serie: Spezialbaukasten für Eisenbahnwagenbau' under 'STABIL'. Despite the '59' stamp, the models include those for the larger sets as well, and go from A. Eisenbahnwagen (Plattenwagen), p2, to H. Eisenbahnwagen. (Planwagen), p9; then J. Eisenbahnwagen (Gitterwagen), p10, to L. Eisenbahnwagen. (Vierachsenwagen mit Drehgestellen.), pp12-13; then R. Förderkorb für Drahtseilbahnen, p14, to U und V. Förderkörbe für Seilbahnen, p16; then W und X. Förderkörbe oder Förderwagen für Seilbahnen on the extra page. There is a large photo of each model, apart from W & X which are line drawings, plus lists of the parts needed, and a few drawings of details, all in the usual STABIL style.

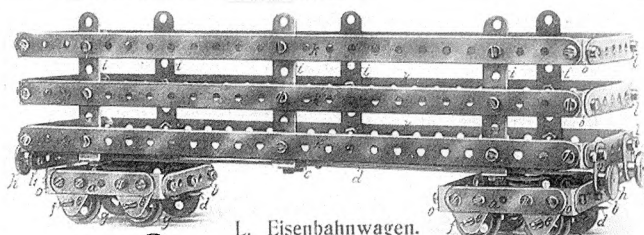
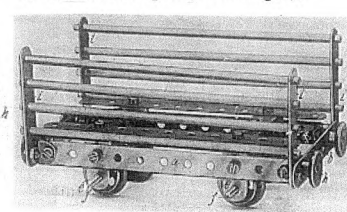
Models A - L are various types of Wagon, all running on 4 Wheels, except G. on 6, and L. on two 4-Wheel bogies. Most are simple frameworks made from Strips & A/Bs, but one has a tarpaulin cover, to be made from paper, one has wooden dowel side members, and one has a crane on the chassis (see OSN 13). The Bogie Wagon needs 26 A/Bs and 102 N&B - it and 2 other Wagons are shown at the top of the next column. To minimise friction the Flanged Wheels run loose between lock nuts on the Screwed Rods used as axles. The models were of ample width to run on 1-gauge track, and it was suggested that the wheel position should be set to suit the track being used.

The parts were standard STABIL except: • The 25mm Ø, turned brass Flanged Wheel, see 19/548. • Special lengths of Screwed Rod - 85mm for the axles, & 125mm

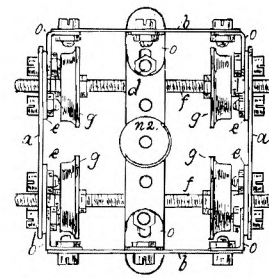
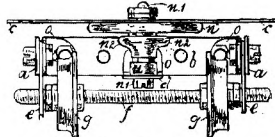
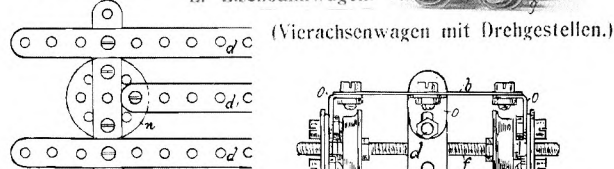
C. Eisenbahnwagen
(Stirnwandwagen.)



J. Eisenbahnwagen (Gitterwagen),

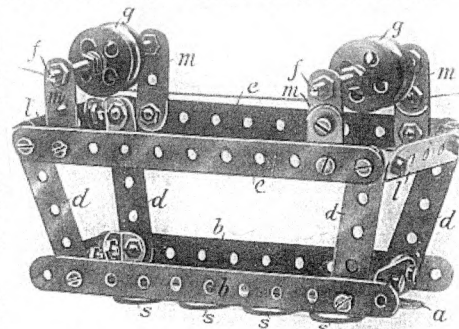


L. Eisenbahnwagen.



used in the Tip Wagon. • The Buffer, a Cheek Piece (PN9, see 13/352) but with a tapped bore. • The Coupling Hook. One only is called up for each model, and none are shown in the photos. It is thought to look like the sketch right. • The small Triangular Plate used in the bogies. This later became PN45 (see 19/355), and later still was renumbered 145. • The Wooden Rod mentioned above, 145mm long and about 4mm Ø.

The remaining seven models are simple cable railway cars, and the largest is shown right. Parts 'g' are Flanged Wheels of course, and 's' are Buffers.



A few points remain mysteries:

- The date of the Manual. One estimate is 1915 but the basic version without the extra pages was probably earlier, perhaps 1912. The same style of manual continued until 1921.
- A manual for the standard sets from 1913 contains an ad for the Railway Sets with an illustration of a Wagon with the floor made from a 5*11h Flanged Plate. No such Plates can be seen in the sets in the 1914 catalogue but perhaps old printing blocks were being used.
- The Manual has a Model J but no Model I; in the extra manual pages, a list of which models could be made with the different sets mentions Model I but not Model J.
- Sets 63a & 64 are included in a list of sets in the extra pages, both marked 'in preparation'. The No.64 was to have built build 13 models, but it isn't known if these sets were ever produced.

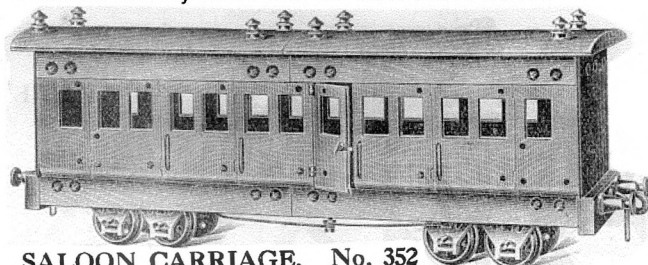
PRIMUS ENGINEERING 1913 saw Butchers launch their PRIMUS outfits - they did not include any sets solely to make railway models but a significant number of the 80+ parts in the system were specifically intended to allow construction of realistic railway stations & 1-gauge rolling stock. In his book on PRIMUS, David Hobson has pointed out that in the first manual, 25 of the 35 models have a railway connection. This aspect was often not referred to di-

rectly in publicity material but railway models were usually shown, and no doubt it was felt that this was enough to attract 'railway' enthusiasts, while not detracting from the systems universal modelling appeal.

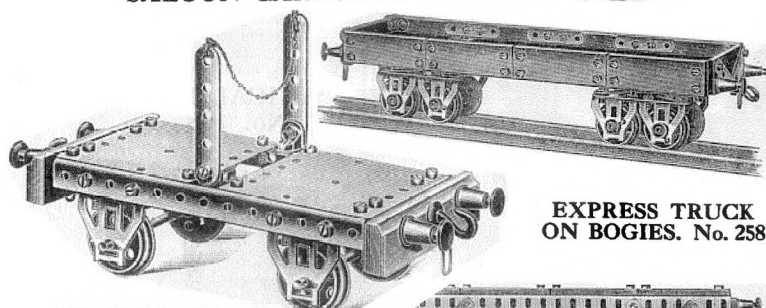
In fact many of the 'railway' parts can be employed quite widely, at least in some classes of models, but it is difficult to find additional uses for some of the wooden parts. The restriction of the number of holes to those needed to assemble the model is one factor in this, but perhaps such a criticism is a little unfair because Butchers took a benign view of modifications to their parts, and a saw and a drill would have solved many problems.

One or two Locomotives were included in the manuals but none were powered and the only flanged wheels in the system were too small to be realistic. 1923 saw the 1-gauge Clockwork Locomotive Outfit (see 5/100) but the same small Flanged Wheels were used, and didn't marry harmoniously with the purpose made boiler & cab. It would be interesting to know whether this Loco could be used effectively with PRIMUS rolling stock. The individual special Loco parts are not illustrated in MCS so an Extra Page will show them.

Since all the PRIMUS parts are shown in MCS and a full account of all aspects of PRIMUS is available from David's book, I'll not go into details, but simply give a flavour of the PRIMUS railway world with the illustrations below.

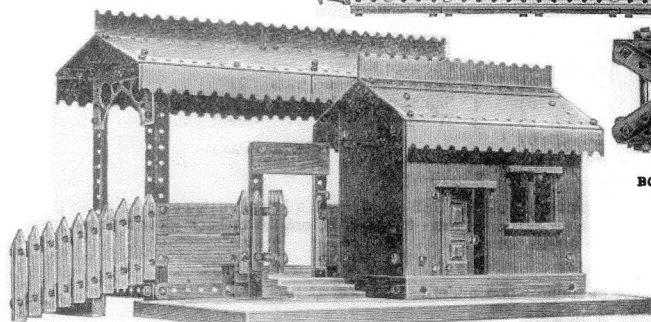
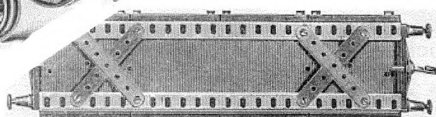


SALOON CARRIAGE. No. 352

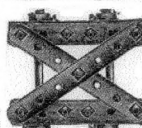


EXPRESS TRUCK ON BOGIES. No. 258

TIMBER TRUCK No. 123.



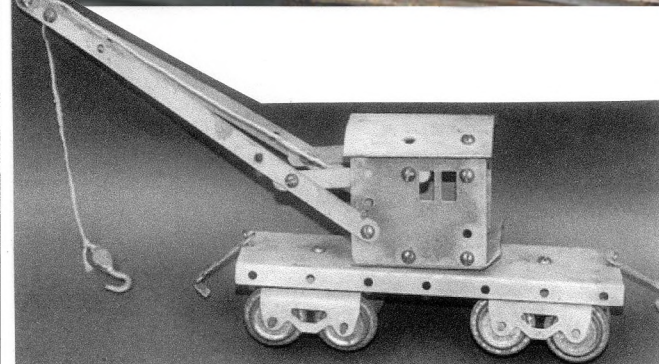
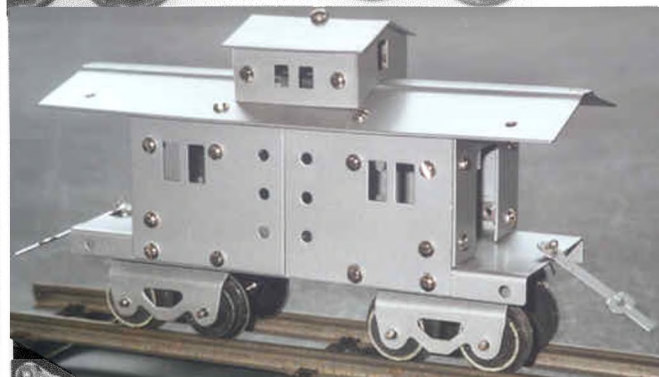
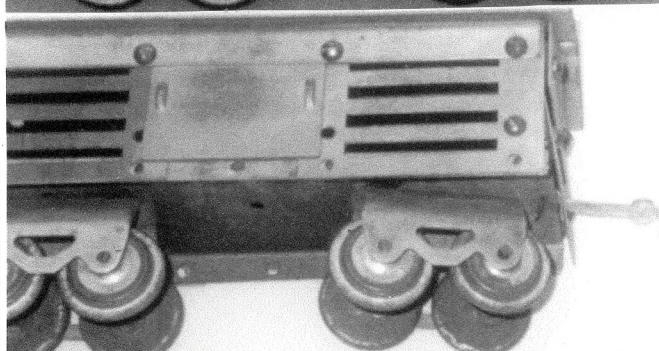
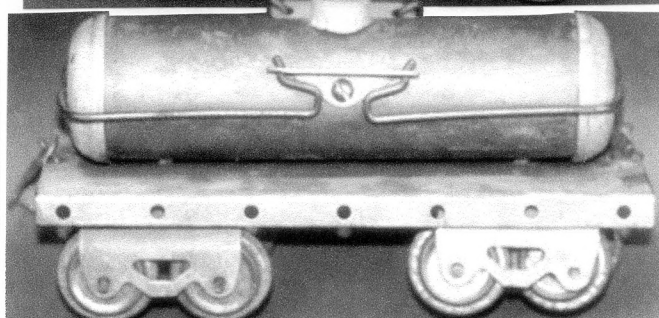
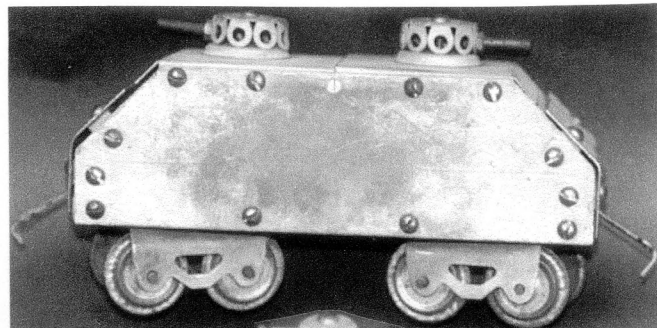
STATION AND STATION HOUSE No. 306



BOGIE FRAME.

METALCRAFT Better known for their Spirit of St. Louis aero sets, the Metalcraft Corp. of St. Louis also produced 3 sets for 0-gauge railway goods wagons. Dates are not known exactly but a patent for the design of the bogie was filed in July 1929, and David Hobson has found a news item about the railway outfits (and other METALCRAFT products) in the May 30, 1930 *Games & Toys*. MCS gives an end date of 1940.

G&T gave a few details of the sets. The smallest had



more than 70 parts, and 5 different wagons (called railroad cars) could be made; the larger sets allowed construction of 8 and 12 models. It was claimed that the cars could run on any gauge, but their size would make them unsuitable for track narrower than 0-gauge, and it doesn't seem possible to space the Wheels for wider gauges. MCS shows 3 cars plus tiny drawings of 8 more; the 12th was the Breakdown Truck above. Also in MCS, the Set Nos: 980, 981, 982, and the contents of the largest outfit, which had enough parts to 'build 4 complete cars at one time'.

Of the models shown above, 4 are courtesy Chris Freeman, and the Caboose is mine - the cupola on top of it

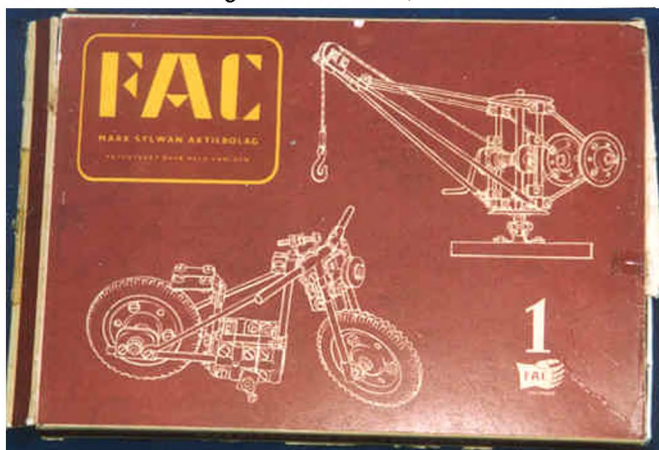


The 'Basic' Indian MECHANIX Set This is a smaller version of the Junior outfit described in 22/627. The box is smaller, 33*21½*3½cm, but the packaging is similar, and the EEC label again has © 1997 on it. The Item No. above the(stuck-on) barcode is 055/091; for the Junior it was /093.

Another FAC No.1 Set This Set, kindly lent by David Hobson, has different packaging to the one described in 18/508. It is complete apart from the manual, the Tools, Tyres, some NBW, and one or two other parts.

The box is brown cardboard, 31½*18*1½cm, and is divided up into 11 areas by 4½mm thick wooden partitions. Printed in dark red on the lid is: 'FAC', & some Swedish words ending in 'MARK SYLVAN A.B.', at top left; and '1' & the Glove logo, bottom right. Pasted on in the middle is a colour photo of a Crane sitting on rocks, as in the manual cover in MCS. This box may be earlier than the No.1 box described in 18/508 – both the lid & the partitioning look less of a 'production job'. Not much can be seen in a copy of the lid so below the one from the OSN 18 No.1 Set – it is printed white on dark red, with the FAC panel in yellow.

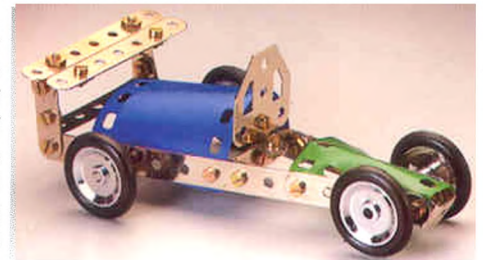
The parts are mostly as the 1953 parts in OSN 18 with the following exceptions & amplifications: • Collars are double-tapped. • The Hook is 33½mm o/a. • The Loose Pulley is brass and 16mm o.d. • Compared to the Set Contents, there are 5 instead of 4x 90mm Rods & 4 instead of 5x 106mm. • The throw of the Crank Handle is 30mm, and its handle is about 22mm long. • The Washer is 8mm o.d. and not the 6mm stated by mistake in OSN 18. • Some of the remaining N&B are the normal FAC black ones, with Bolts in all the appropriate lengths, but there are also some plain steel ones with smaller Nuts, 5.4mm A/F, and 8 & 12mm Bolts with larger cheeseheads, 5.3 to 5.5mm Ø.



On the bottom right of the lid is 'ART. NO. 52', there was nothing similar on the earlier Sets. Otherwise the lid is generally similar to the Junior, red with photos of 5 models on it.

The Set has 25 N&B against 37 in the Junior and the total number of other parts is reduced by about the same proportion. The 6 parts omitted completely are the Flanged Plate, Trunnion, ½" & 1" Loose Pulley, Crank Handle, & Driving Band. Those remaining are identical to their Junior counterparts except that the 1" Pulley is black plastic (with the same nickel boss) and the Screwdriver, missing from the Set, must be shorter, judging by the 12cm long recess for it in the packaging.

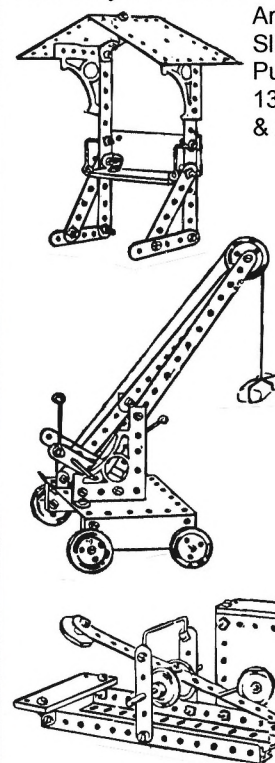
The Model Sheet is generally similar too, but smaller at 47*35½cm, and the Set Contents are shown in the centre on the back. 7 models, from ROBOT to CRANE, are on the front side with the name panel, with 3 photo steps for each. Overleaf are 10 more, from MINI CAR to TRICYCLE, with just one photo of each model. 2 of the 'Basic' models were on the Junior Sheet, including the Helicopter of 22/628, & a few others are modified versions of earlier designs. One of the better models is shown right, and it could easily be improved using the rest of the parts in the Set.



PRIMIUS OUTFITS A, B & C David Hobson kindly gave me a photocopy of the Model Leaflet for these small sets, hitherto only known by name. They are thought to have been introduced in 1924, no doubt in an attempt to boost sales in the face of difficult times for the company.

The Leaflet is a sheet about 17*8½" folded into three. On one side a panel in which is shown 2 boys playing with a Crane, with a Coach & an open set in the foreground, a well known PRIMUS scene, and 30, 54 & 84 models are claimed for Sets A, B & C. Alongside are the 30 'C' models, while on the back are those for Outfits A & B. The models aren't named or numbered, and there is a small line drawing of each.

From the models, the main parts in Set A are 2x 11h & 6x 5h Strips, a 6*6h Plate, 2x 1" Loose Pulleys, & 2 1½" Wire Stays. Added in 'B' are: 4x 6h Strips, another Plate, 2 Architraves, a Crank Handle, 2 Wood Slips, and 2 each 1" Loose & Fast Pulleys; extra in 'C': 2x 13h Strips, 2x 13h A/Gs, 2 Slips, 2x 1" Fast Pulleys, & 2 each 1½" & 3½" Stays.



As might be expected Set C is appreciably smaller than the smallest standard outfit, No.0, and the range of parts in the two are rather different, with no Architraves in the No.0. All the A/B/C models are very simple of course, and some could be improved from the parts in the Sets, but the Architraves do improve the appearance in some cases, and nearly all the 'A' models are much better than those for the very small JUNIOR ENGINEER'S OUTFIT described in 9/231. The models on the left are actual size - the Seat & Crane are for Set B & the Trip Hammer for 'C'.

(see 17/464). The photos of sets 1-3 are essentially the same as those in MCS; the No.5 has 3 layers of parts, two of which look as if they may be like those in the No.3. Also listed are the previously unrecorded linking sets 1A & 2A, and the Catalogue Nos. for all these sets are 1, 1A, 2, 2A, 3, & 5.

The Catalogue No.4 is the **METALCRAFT** set (see 14/393), and No.6 is the **PIONEER** set (17/466). So these two sets were definitely from the VOGUE stable, and they were on general sale, and not, at least at that point, special sets created for a particular customer. Also though very similar to one another, they existed at the same time. From the Cat. Nos., METALCRAFT may have come first. As might be expected the wholesale prices of the two sets were very similar, 96/- per dozen for METALCRAFT, & 100/- for PIONEER. Thus they fell between the No.1 set at 64/6 & the No.2 at 136/-. Nos. 3 & 5 were 185/- & 257/-.

The Supplementary Spare Parts Sets 1-5 mentioned in OSN 17 are listed; their contents are given and are as in MCS.

The maker is given on the Catalogue as Cascelloid, Abbey Lane, Leicester, Division of The British Xylonite Company Limited. Their offices & showrooms were at 9 Conduit Street, Mayfair, London, W1, and 7 Pall Mall, Manchester 2.

METALCRAFT [2]: S1; PIONEER: S1; VOGUE: S1 [28/814]

9. From Clive Weston, details of a **PRIMUS Set B**, apparently unused, the first ever reported sighting (see 24/712). It is in a blue box, 9 $\frac{3}{4}$ "x7 $\frac{1}{4}$ "x $\frac{3}{4}$ ", with the label below. The contents are: 6,4,2 of 5,6,11h Strips; 2 each of 6*6h Plates, Architraves, 1 $\frac{5}{8}$ " Wire Stays, & Wood Slips; 5x 1" Loose Pulleys; a 3 $\frac{1}{2}$ " Axle with Tapped Ends (#167); 12 A/Bs; 17 N&B. No sign of a Tool of any sort.



Most of the parts are held in slits in a red backing card, but the A/Bs & N&B are within triangular partitions in two of the box's corners.

The model leaflet is the one described in OSN 24. Some of the 'B' models in it would need parts not in the Set: a Fast Pulley or Axle Stops to locate a Loose one; a Crank Handle; and longer Bolts for the Loose Pulleys, if they were to run freely.

With the Set was a leaflet listing the full range of PRIMUS sets. The 'C' outfit is illustrated and its packaging is in the same style as that of the 'B'. The extra 'C' parts appear to be in line with the details given in OSN 24 except that the Set has 4 Fast 1" Pulleys & one Loose one. A Screwdriver, a Crank Handle, & 2 Axles can also be seen.

The Leaflet is undated but from David Hobson's *PRIMUS* book (see 20/583) it seems likely to be from 1923 or 1924, and the 'A' set, price 1/6, may have been the unidentified outfit from 1923 mentioned on p25.

PRIMUS ENGINEERING: S1 [28/814]

10. From Don Redmond. **STABIL** Flanged Pulleys have two different styles of boss (both on the inside of course). One is the usual stubby cylindrical type with very small peening; the other is thin, with a rounded edge to the free end, and held in position in the disc by a crimped-on wire ring.

STABIL: S1 [28/814]

11. On **ERECTOR** Bolts, Don Redmond mentioned 3 types: 1) Gilbert MECCANO, with what he calls a 'button' head, 5.8 to 6.1mm Ø, the edge almost rounded in at the margin (like antique shoe buttons). 2) Duplex standard or large headed, 7.5 to 7.8mm Ø, 3mm deep. The large head, needed because of the 1/4" holes in the Duplex parts, is prominently round. 3) Medium headed, 6 to 6.9mm Ø, under 3mm deep, with a rather wide slot, apparently forged rather than sawcut as the sides of the slot may slope.

ERECTOR: S1 [28/814]

QUERIES [28/814]

Query 28 from 27/803. Some **STRUCTO** parts are now to hand and the groove in the Axles is vee shaped, with the apex angle rather greater than 90°. The depth is hard to measure accurately and varies a little from part to part but is probably between .5 & .7mm. The Crank Handle & Crankshaft are also grooved.

Query 29 What colour (or colours) is **STABIL** Cord?

MYSTERY PARTS [28/814]

No.51 from Don Redmond. A 19h A/G, with a 15mm slotted arm, the other 12 $\frac{1}{2}$ mm, & the hole pitch is 12.7mm. The metal is only .55mm thick and it has a very marked curve, perhaps 2mm radius, at the bend., It is painted, rather badly, bright green.

No.52 More from Don. Parts similar to **JUNIOR MECHANIC** (see 12/327) but both sides of the Wheels are nicely enamelled red, and both sides of the Flanged Plates are also painted. The ends of the Strips & A/Bs are rounded.

SMALL ADS [28/814]

For Sale. Large collections of **TRIX & FISCHER TECHNIC**. Details from Ivor Ellard, 44 Well Lane, Galleywood, Chelmsford, Essex, CM2 8QZ; phone 01245 269830; email ellard@nildram.co.uk.

Wanted. Any metal nut & bolted together **constructional car or other vehicle kits**, or any parts identified or not, ie wheels, axles, chassis, steering gear, mudguards, wings, clockwork motors, etc. Anything & everything in any condition considered. Also boxes, instruction manuals (copies if you don't want to part with originals), or any information at all.

Please call Gary on 01635 200460 before 8pm or email me at gary2car@aol.com.

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