

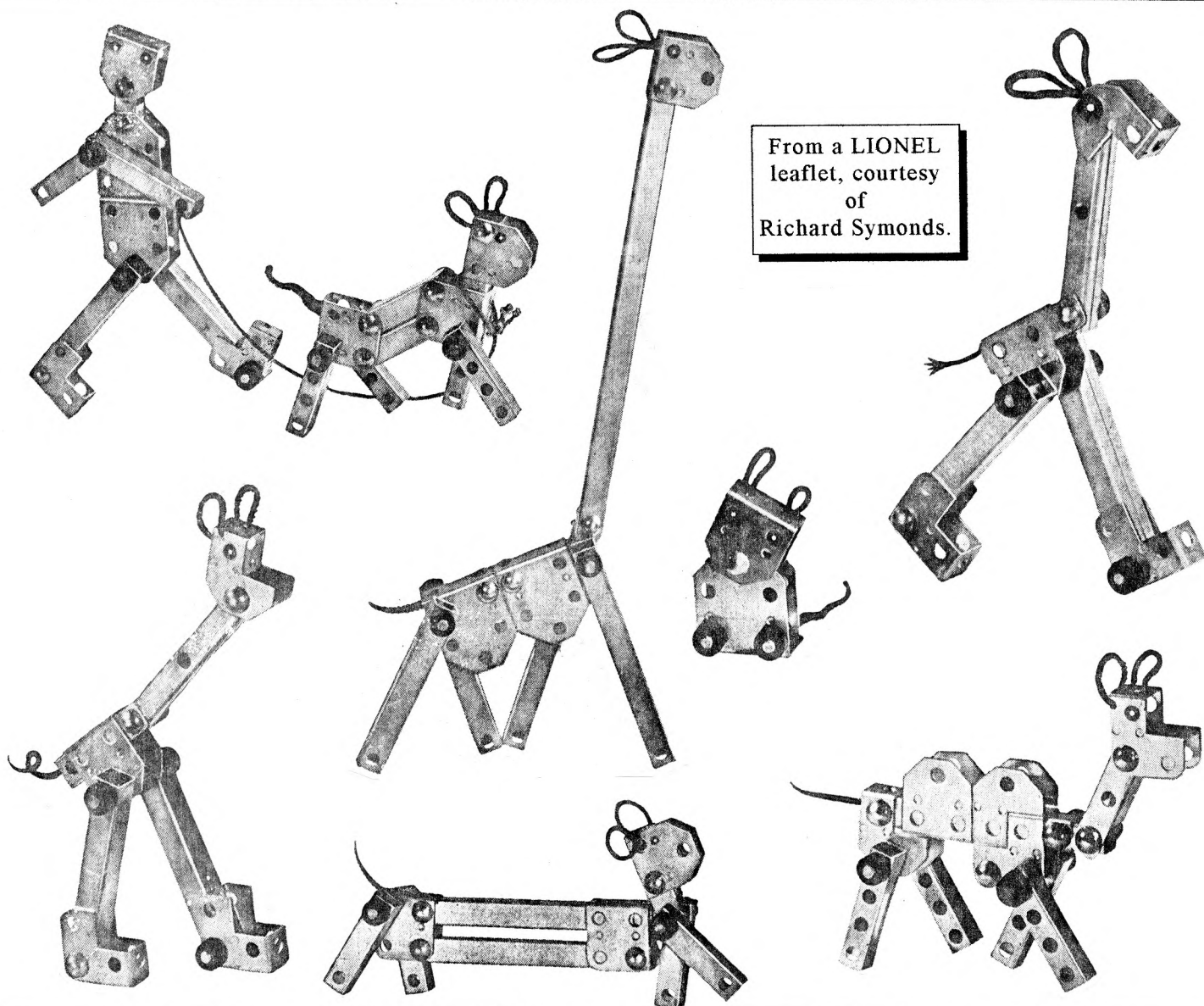
EDITORIAL A word of explanation about a few changes to OSN that start with this Issue. The use of columns on most pages will I hope make for easier reading, and at the same time make it rather simpler for me to include illustrations within the text.

To save a little space and some repetition, the 'Amendments to the Index in OSN 6' will no longer appear at the end of appropriate articles. The information will still be there in the text of course, most of it in a new 'DATA' paragraph which will often be used to give the main dimensions of a system. I think that most readers who used to keep the Index up to date now use the

Database as an index, and either amend it to suit their own needs, or are content to wait for the updates of it that will appear from time to time.

For similar reasons, the 'Amendments to MCS' will also not be included. They will still be available though, in the form of an 'MCS Amendment List' which will be produced as an 'Extra MCS Sheet' with each Issue. As well as the material arising from the Newsletter it will also include minor changes and corrections to MCS which don't need to be mentioned in OSN.

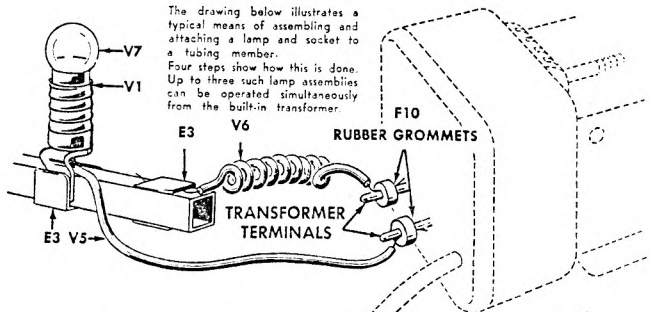
One other thing, would North Americans please note that resubscription through Ed Barclay is no longer possible.



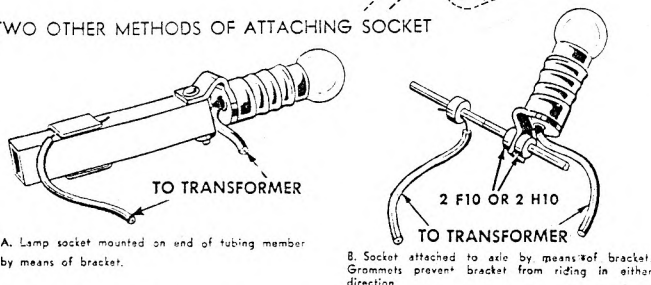
MORE ON LIONEL:

- Not all the parts listed on p6 of MCS are illustrated and those that are not will be shown in an Extra MCS Sheet. A Cylinder is listed on p6 as a part in the #343 Set: I have nothing on this and would be grateful for details and/or a copy of a model in which it is used.
- The LIONEL illumination parts aren't in MCS either and the illustrations below make all clear I think. But what were parts V2-V4, if they ever existed?

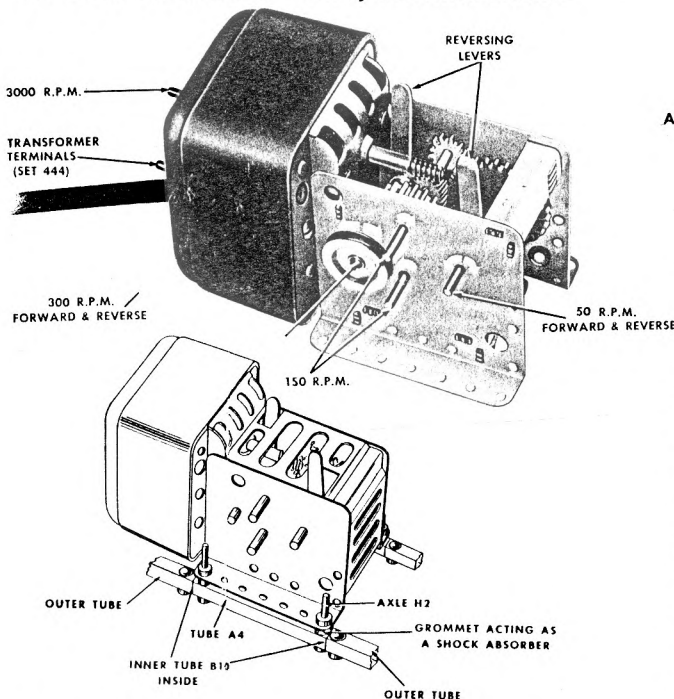
METHOD OF ASSEMBLING AND ATTACHING LAMP AND SOCKET WHEN ILLUMINATING MODELS



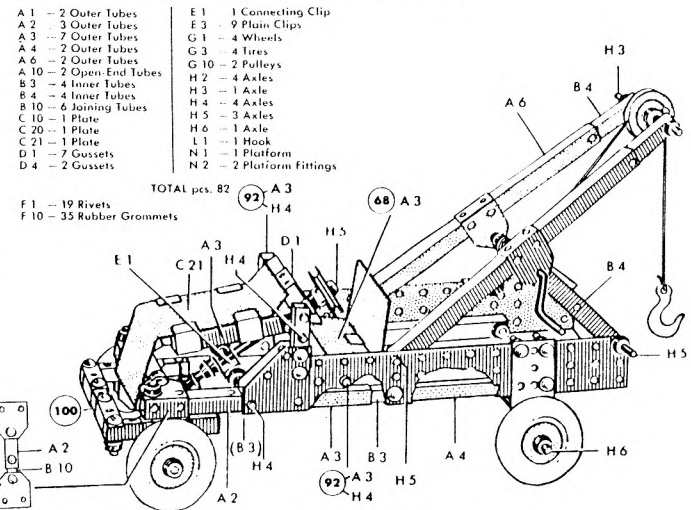
TWO OTHER METHODS OF ATTACHING SOCKET



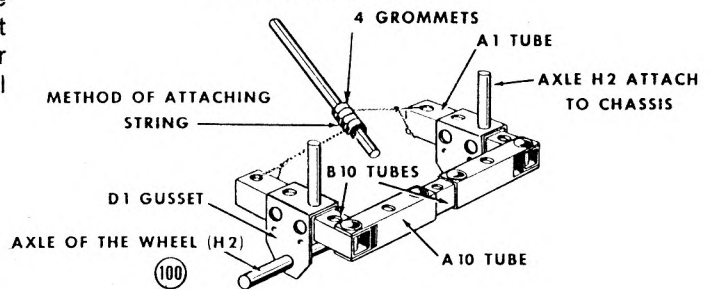
- Extra LIONEL parts were sold in 'Combination Packages' at \$1 each - there are 10 different packs in a list I have here, with No.1 containing 20 Tubes of different lengths, etc. Full details on request.
- Likewise I have illustrations of Outfits 333, 343, 444, 454 and 565 if anyone needs them; they give some idea of the layout of the parts.
- A motor with no shielding over the gearbox is in MCS but not much detail can be seen and the illustration below may be clearer. Also below the shielded motor: Richard Symonds kindly sent me a 444M which is just like the picture except that it doesn't have the short holes in the casing that are in line with the reversing levers. The casing of the motor is black plastic; the gearbox housing in bright plated steel and the motor is attached to it by two small screws.



• Richard also sent some parts, as did Kendrick, and so thanks to them I was able to make a model. As Kendrick says opposite it can be done, but it certainly wasn't particularly easy. I made the Tow Truck below and among other problems it was impossible to angle the main crane jib members as shown without severely distorting them and jamming the Crank Handle solid. A solution wasn't too difficult to find but it's easy to see how the Tubes get out of shape. I must say though that I was pleased with the model when it was finished, it was stronger than I'd thought it would be and the Rivet/Grommet method of joining the parts was reasonably satisfactory, even with Grommets that are getting on for half a century old, and are not perhaps quite as pliable as they once were. The Clips, E3, also worked well but most had to be bent to have exactly the correct gap before use, otherwise they were either too loose to hold the Plates firmly, or so tight they gouged the metal as they were forced into position. No doubt they were just right when new. The steering mechanism is a standard LIONEL method used on several models, and worked very well, with no lost motion and about the right gearing for a model. I'd seen such cord operated mechanisms in MEC-CANO literature but I'd never tried one until now.



No. 236 TOW TRUCK



ASSEMBLY SHOWING MOVEMENT OF THE FRONT WHEELS ON CARS OR TRUCKS

• A couple of points about the parts. The Wheel, G1, is made of hard red plastic; the Tire which can fit on it is of a softer plastic, either black or cream, with LIONEL moulded into both sides. The Pulley, G10, is brass and is the only part with a boss: it is single tapped 4-40.

As well as Kendrick and Richard, thanks are also due to Ed Furness for the information in this piece.

SUMMARY OF MANUAL. #Name: LIONEL #Details of maker: THE LIONEL CORPORATION, 15 EAST 26th STREET, NEW YORK 10, N.Y. #Dates &/or Ref Nos: Copyright 1947 on IFC #Page size: 268x190mm deep #No of pages: 32 inc covers, all unnumbered. #Language: English #Printing: Models are line drawings; cover is red with black & white lettering #Page No of Parts List & highest PN: 3,T2

#No Set Contents provided #Sets covered: No.111 & 222 #No of models for each set: 25,47 #Name, Model No, Page No of first & last model of each set: 111: GUTTER BRUSH,110,8; ELEVATING LADDER,112,14. 222: FOLDING STEP LADDER, 202,15; BRIDGE SPAN,203,30. #Other notes: photos of Sets 333 & 444 are shown on



On the front cover a sticker says that all models can be made with Kit No. 454.

p31.
SUMMARY OF MANUAL. #Name, Maker, Dates, Language, Contents: as above. #Pages: 64 plus covers, 306x214mm deep. #Printing: Line drawings of 111/222 models; half tone for rest. Cover is yellow with



red, & black & white lettering #Page No of Parts List & highest PN: 60,T2 #Sets covered: 111, 222,333,444 #No of models for each set: 25,47,17,19 #Name, Model No, Page No of first & last model of each set: 111; 222: as above. 333: LETTER SCALE, 301,26; EXCAVATING SHOVEL, 317,40. 444: BRIDGE, 401,41; WINDMILL,419,59. #Other notes: no set no. is shown for the 111 & 222 models.

In OSN 10 I asked for details of the Knirps sets and Werner Sticht sent the following, with copies of pages of his manuals from which I've chosen the illustrations.

STABIL: The smallest Outfits - Knirps Nr.1, Knirps Nr.2, and the Knirps Motor

In Berlin, Walther & Co. produced MCS under the trademark STABIL. These were so popular that the name 'STABIL-Baukasten' became a synonym for any MCS in Germany even if it was produced by Märklin, Meccano, or anybody else.

The standard STABIL outfits were numbered 49 to 55; this numbering is unusual but if you look at the numbering of the parts you can see that there are none with those numbers. Obviously they were reserved for the outfits. When Walther & Co. introduced the the smaller sets 46 to 48, the former parts 45 to 48 were renumbered 145 to 148. I don't have any information about an outfit 45 but from the numbering scheme you can suppose that it was planned, perhaps as a K1 set but with better quality parts. K1 is an abbreviation for the 'Knirps-Baukasten Nr.1' The word 'Knirps' in this context means a little boy.

Perhaps to compete with TRIX and Märklin's MARBI, Walthers introduced the K1 and K2 outfits; a small C/W motor with the name 'Knirps' was produced too. In my manuals for 1929 this motor wasn't mentioned, but in manuals from 1936 to 1968 there were models for sets 49M and 50M, and sometimes even for 51M, that were powered by a Knirps motor.

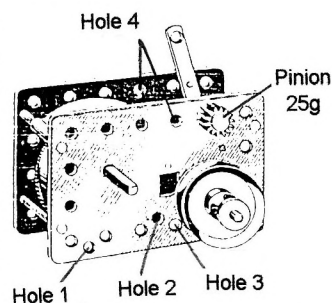
As it was sold until 1968 when Walther & Co. closed, you can assume that the Knirps motor was a total success. No reversing mechanism was included. In 1960 the price for a Knirps motor was 10 DM, and a TRIX electric motor was 4.50 DM.

The Knirps motor was advertised as the 'kleine Bergsteiger' (little mountaineer); it climbed a 30° when put in a self-contained tractor model. The Knirps I have at home is more powerful, but if you incline the plane more steeply, the centre of gravity lies behind the rear axle, and the front wheels rise, and the tractor topples backwards.

The output shaft cannot be removed and is only 2.5mm dia. Two special pulleys with set screws were supplied with the motor and can be fastened to this shaft. One is a double pulley and the second groove is of small diameter. The tyre, 84b, can be put on these special pulleys.

Also supplied was the special pinion, 25g, with 14 teeth, 4mm in length. It can be fastened to a threaded rod, and if

the rod is located in either Holes 1 or 2 the pinion meshes with the internal gear wheel on the main shaft that carries the spring; in Holes 3 or 4 it meshes with the gear on the second shaft. You can thus obtain four different speeds: slow with the pinion 25g in Holes 1 or 2; medium with it in Holes 3 or 4; fast or very fast when using the two grooves of the double pulley.



A leaflet was packed with with the Knirps motor and I think that the 16 models in it (some are shown opposite) were never changed from the time it was first printed. Most of them could be made with one or more Knirps outfits but some needed other small STABIL sets or additional parts. The leaflet I have is from 1957 and outfits K1, K2, and 46KM are mentioned in it, but I have never heard that these sets were offered after WW2.

K1 and K2 were special small outfits from Walther & Co. I have a manual for a K2 from 1935, but for the K1 I only have the information from my Knirps motor leaflet. From this the contents of the K1 can be reconstructed as: 3x3-hole Strips; 2x5-hole Strips; 2x7-hole Strips; 2x9-hole Strips; no Angle Brackets; 3 Nr.4, Screwed Rods, 50mm; 2 Nr.18b, DAS 3 holes; 4 Wheel Discs.

The K1 does not really fit in the system of standard STABIL outfits; it was put together to sell as a very cheap outfit. If you compare the contents of the K1 with the TRIX 1 set [called 'Unit A' in the UK postwar], you will find that they are very much alike.

Once I saw a 3-hole DAS and a Wheel Disc from a K1. They were plain steel, not nickered, and the DAS didn't have the normal STABIL elongated holes at the ends. All the holes were smaller than normal, a threaded rod could be screwed in but it couldn't turn freely when the part was new, although it might after some wear had occurred. The Wheel Disc was specially produced for the K1, and had 9 holes in it; 4 were so small that no bolt or axle would pass through, but they could be used for cord, as in the Big Wheel.

From my manual for the K2 you can see that it is nearly identical to the STABIL Nr.46. The only difference is that 4 Auto Tyres, Nr.84b, were included in the 46. The K2 contained: 3x3h, 4x5h, 2x11h Strips; 4 Angle Brackets; 2 Flat Brackets; 12 Bolts; 20 Nuts; 1x50mm and 2x90mm Screwed Rods; 4 26mm Pulleys without Boss, 5c; 1 Spanner, 10b; and 2 each of 5 and 3-hole DAS. It says in the manual that 'the parts are nicked as the parts of the STABIL outfit are', and that the flat strips may also be used as screwdrivers. The special parts introduced for the K2 set were the pulley 5c, the spanner 10b, and the 3h DAS, 18b:

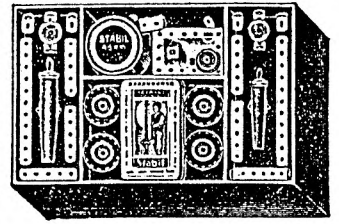
- There are no holes in the face of the pulley 5c and its two halves are only rivetted at the centre hole. This gives the disadvantage that they wobble when used as loose pulleys, but when locked between nuts on a rod or bolt, they take up less space than the normal pulleys with a bulge at the centre. The pulley 5c was included in outfits 46KM, 47KM, 48M and 49M instead of Pulley Nr.5.
- The spanner 10b may have been included in the K1 set too.
- The 3-hole DAS 18b was also included in the 47KM, 48M, 49M, and 50M sets. It was not added to the standard STABIL outfits.

There was never a Knirps outfit which included the motor but for some years there was a conversion set, K1a, to upgrade the K1 to the K2. All of the Knirps parts fit standard STABIL parts.

The manual for the K2 is a special one for this and the 46 outfit, and it contains 150 models for these sets (see Fig A). It is of poor quality and the covers are dark blue with the

look of the covers of an old school exercise book. The page size is 13.3x20mm long.

Other Small Outfits The Nr.46 has already been described; the sets with suffix M contained the Knirps motor in addition to the normal parts with, in some cases, one or two other minor changes such as the use of the different pulleys Nr.5c already mentioned. The Nr.46KM was called the 'Kanonenbaukasten', and over and above the Nr.46 outfit a Knirps motor, a seat for the driver, two little gun barrels of different lengths (suffix K for Kanonen), two pulleys 5c, and some collars, Nr.7, were added. The seat was a rather complicated part with the bottom of the bracket formed into a hook, see Models 14 and 15 below. There was also a 47KM set but I've no details of it.



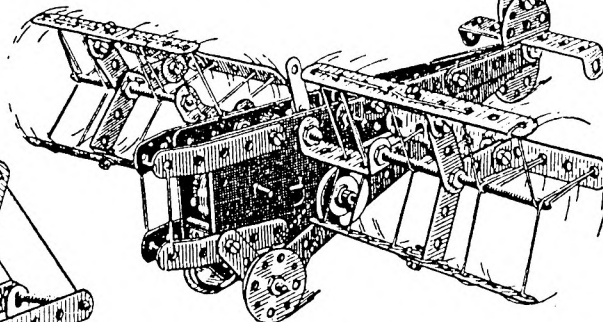
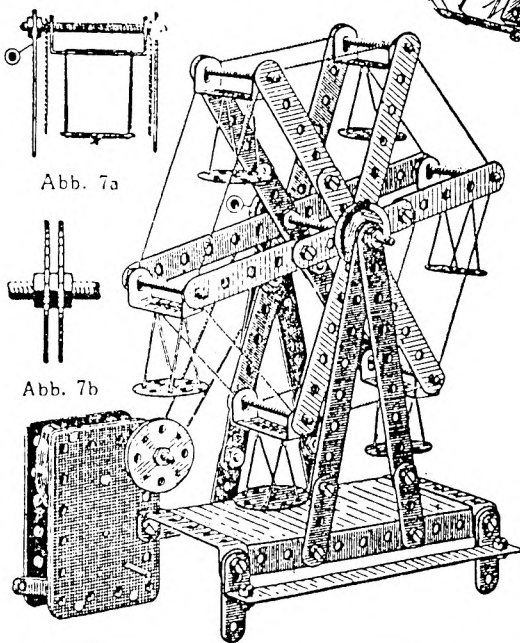
STABIL Nr. 46 KM
KANONENBAUKASTEN

I have seen two conversion sets listed: in 1936 a 46a which would make either a 46 or a 47 up to a 48; and in 1939 a 'K2-46a', to convert the K2, 46 or 47 into the 48.

The Nr.48 was the smallest outfit after WW2 and it included a 5x11h flanged plate and two 9cm threaded rods; also a special manual for that set alone which contained 205 models.

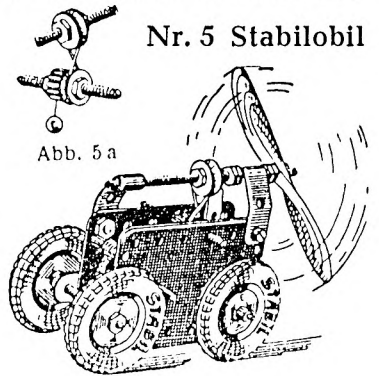
Nr. 7 Radschaukel

gebaut aus 2 Knirps Nr. 1
und 1 Knirps Nr. 2



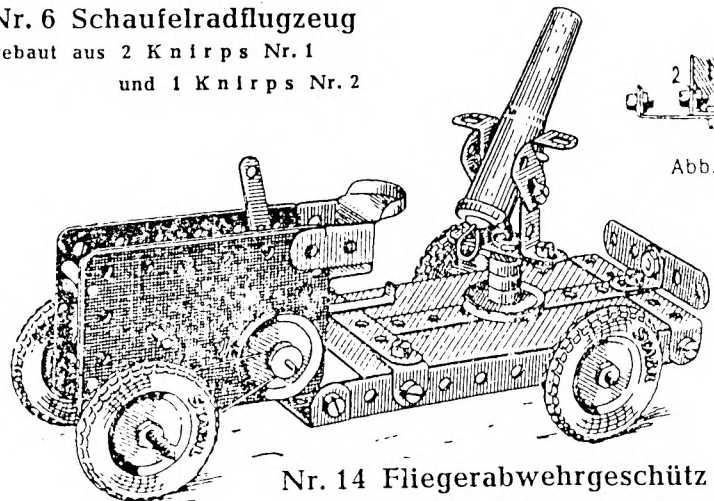
Nr. 6 Schaufelradflugzeug

gebaut aus 2 Knirps Nr. 1
und 1 Knirps Nr. 2



Nr. 5 Stabilobil

Abb. 5a



Nr. 14 Fliegerabwehrgeschütz

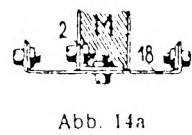
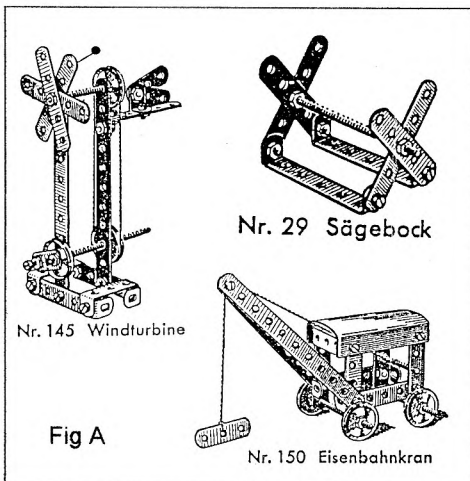


Abb. 14a

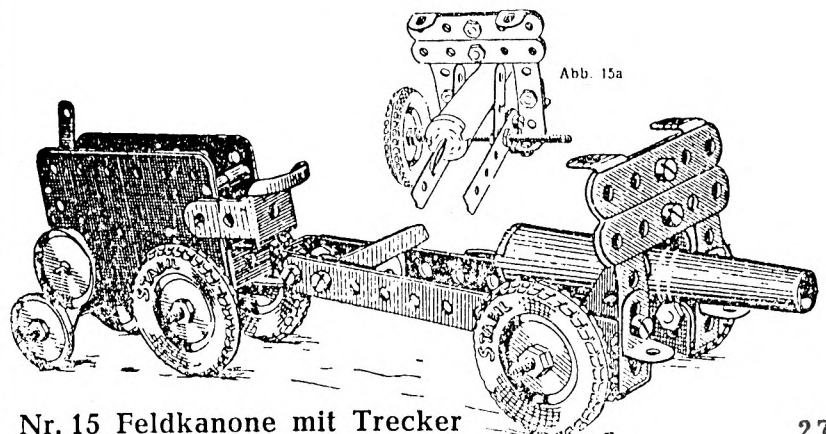


Nr. 145 Windturbine

Nr. 29 Sägebock

Nr. 150 Eisenbahnkran

Fig A



Nr. 15 Feldkanone mit Trecker

Abb. 15a

BUILD from BIRMINGHAM

The American post WW2 BUILD is in MCS but this BUILD dates from around WW1 and as can be seen from the illustrations below, it's an early architectural system. There were 3 Sets available, A, B and C, and Roger Baker was lucky enough to come across a Set B, which seems virtually complete, including a manual for 'Country Cottages (Sets A and B) and Farm Houses'. He kindly sent details for this article. The models are to a scale of 3/8" to the foot and are 'Tudor' style, though that word isn't mentioned anywhere. The stated object of BUILD material is 'to teach as much as to amuse, to create and encourage an interest in things beautiful, and to widen the powers of observation, without which we are no better than blind boys and girls'. BUILD was made by Allday Ltd, Birmingham; no precise dates for it are known but its patent (No. 1454/15) indicates the 1915.

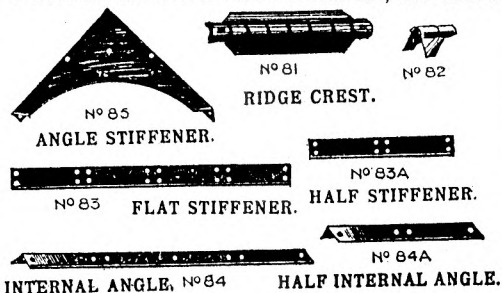
Basically the system consists of richly coloured card panels with small holes in them, which allow their attachment to steel strips and angles, or in some cases, to each other, by tiny brass bifurcated (paper) clips, called Pins. These have round

heads 3.4mm dia, with shanks 1.3mm wide and about 8mm long. A selection of the panels and all the metal parts are shown below. For the walls there are 32 different panels in all, including various Gables and Barge Boards in two sizes, and Doors and Windows; the basic colour is a yellowy beige with the wooden parts, beams, window frames, etc, dark brown. To add realism bricks can be seen showing through the 'rendering' in some of the beige areas. The Windows are black with lighter lead strips, fawn curtains, and bowls of flowers: the latter items look well but are of course identical in all the windows of the same size.

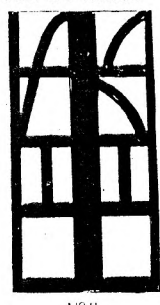
Roof panels are a dull red with darker shading in places and are corrugated to give texture to the simulated tiling. There are 20 panels and they include Hips and Valleys, again in two sizes. Also provided are Chimney Caps, Posts, and Stone Flagging floor panels.

All the metal parts have a blued finish: the holes in them are 2mm dia and their pitch is either 6.5 or 32mm. #84 is thus about 6" long and that represents the height of the walls of a 2-storey house.

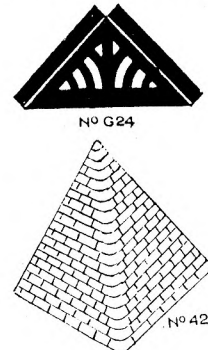
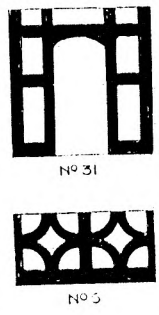
8 models are shown in the Manual, the first 3 can be made



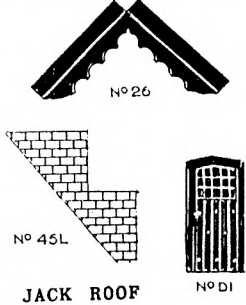
METAL PIECES.



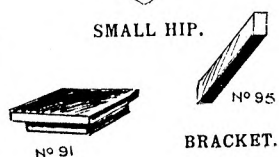
CHIMNEYS.



SMALL HIP.



JACK ROOF

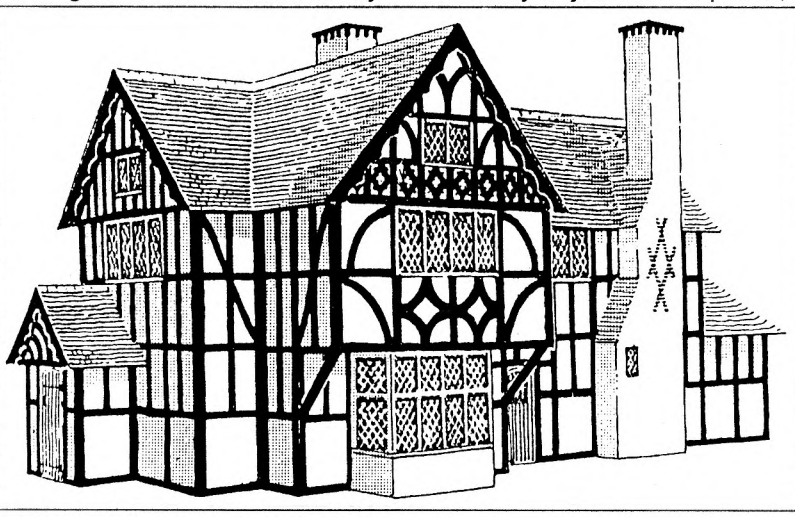


BRACKET.



No W4

with Set A, another 2 with Set B, and all with Set C. For each there are line drawings showing the finished house, others that show which panels go where, and a plan marked with the PNs of the bottom row of panels. No detailed instruction are given about where the metal parts are used. It isn't a question of making a framework and covering it with panels, the Stiffeners are added as the building proceeds and, to quote the Manual, 'If you have carefully pressed home the pins and used proper discretion in the use of the metal stiffeners, your house will be rigid and nicely square.' Roger wrote that it was a matter of trial and error, but confirmed that the few hints given by Messrs Allday seem correct. The Flat Stiffeners are mostly used horizontally to join rows of panels, and the Internal Angles



are used to join the roof to the gable ends, and to attach extensions to the main structure. The corners of the buildings are made by bending suitable panels and then using Angle Stiffeners to give rigidity. The latter are also used to the same end at the ridge of a roof, once the two sides of it have been pushed into the Ridge Crest pieces. These consist of a bottom angle and a semi-circular top member permanently clipped together with a gap between for the roof panels to enter.

When new the holes in the panels are little more than pin size and Roger opened them out as necessary with a small bradawl that he found in the Set, though it may not have been original. He also wrote that assembling the panels with the Pins was exceedingly fiddly and 'once the Pins have been used and the shanks are no longer straight, it sorely tries the patience. But thankfully the finished product is worth the effort, the models are well proportioned and very picturesque.'

No details of Set Contents are given but there's a Price List on the back inside cover of the manual, or Text Book, to give it its Allday name. Country Cottages, Set A cost 5/- and contained over 100 Pieces; Country Cottages, Set B was 7/6 with over 150 Pieces; and Farm Houses, Set C had over 200 Pieces and was 10/6, but that figure has been crossed out by hand and 11/- written in. Extra parts were also listed, 1/- per dozen pieces of any of the parts, and 200 Pins for 6d.

MORE ON STRICON Following on from 10/256, René Mikkers has now obtained manuals for Set 1 and for Set 2, and he kindly lent them to me for this account. In the Set 1 manual there is an illustrated parts/contents list for Set 1 and for Set 2, and these will form an MCS Extra Sheet. The main points of interest are:

- The total list of parts is as given in OSN 10, but plus the 5x3h Flanged Plate (PL 15) which was found among Frank Beadles parts but which couldn't be identified from the #3 Manual. It was part of the #1 Outfit and it is strange that it is not used in any of the models in the #3 Manual, even though several Set 1's are needed for some of them.
- The illustration of the Spandriver shows it without any holes in the shank, like Frank's one: no doubt the 4-hole version shown in the #3 Manual came later.
- Both the holes in the Angle Bracket are round: it is shown below together with one or two of the other parts not illustrated in OSN 10.
- There is no mention of the Spring Cord which seemed to be used in one of the #3 models, so it must have been thick string. No cord is included in any of the Outfits.

Set 1 contains one of the small Flanged Plates, 12 Strips, four W38 Discs, four 20mm Half Pulleys, two 1x2x1 DAS, two Angle Brackets, four Threaded Rods of various lengths, and some Washers and N&B. 24 small models are shown that can be made with Set 1 on its own, and curiously none use the Flanged Plate.

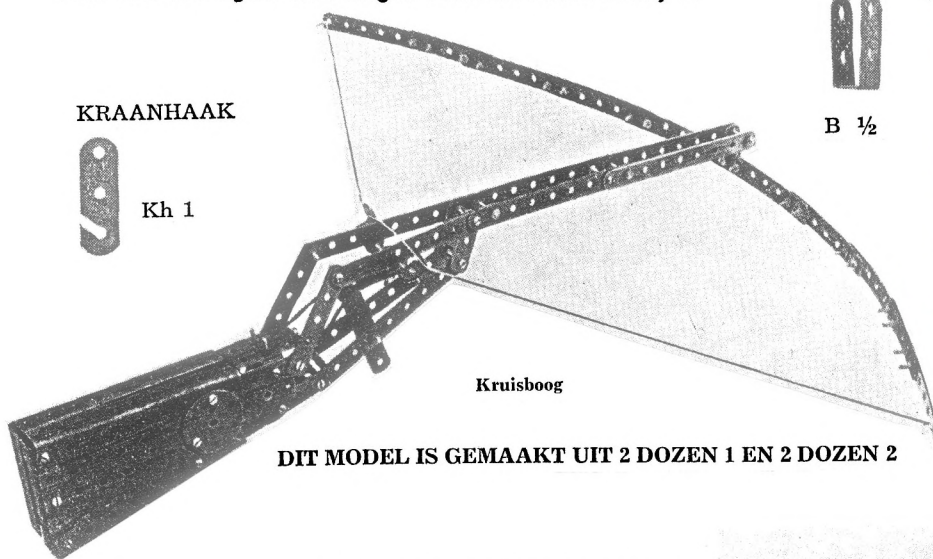
Next the contents of Set 2 are illustrated and the main parts are four 9-hole Strips, a 7x3h Flat Plate, four 30mm Half Pulleys, two each of 9 and 5h Angle girders, two 1x3x1 DAS, and a Hook. Then there are 11 models which need both Sets and again the Flanged Plate isn't used in any of

them. Finally photos of 8 models which need more Sets, the instructions for most of them are given in the other manuals.

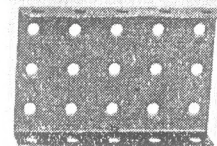
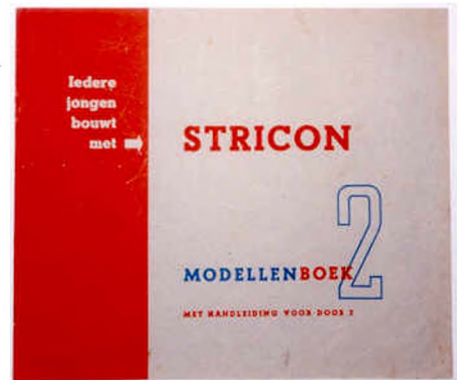
The #2 Manual starts with 13 more models for Sets 1 and 2 combined, then 2 that need extra #1/2 Sets, and 5 photos only for models that need Set 3. None list the Flanged Plate among the parts required. Two of the 1/2 models are shown below. The illustrated parts for Set 3 are shown on the last page together with a photo of the #3 Manual. Its cover (below, left) shows a Gantry Crane and is completely different to the plain covers of the #2 and 3 Manuals described here, and that of the #3 described in OSN 10, all of which are identical apart from their colour and Book No.

SUMMARY OF MANUALS. (details which are the same as those given in 10/257 are not repeated) #No of pages: 20 plus covers. #Printing: cover is green and fawn with green, fawn and red lettering. #Page Nos of Parts List/ Set Contents: 2 for Set 1; 9 for Set 2. #Sets covered: 1 and 2. #No of models for each set: 24 for #1; 11 for #1+2. #Name, Page No of first & last model of each set: 1: Waarschuwingsbord,3; Vliegtuig,8. 1+2: Torenkraan,11; Carousel,15. #Other notes: This is Modellenboek 1, the manual described in 10/257 was Modellenboek 3. Photos of 8 models that can be made with various combinations of Sets 1, 2 and 3 are shown on pp 16-20.

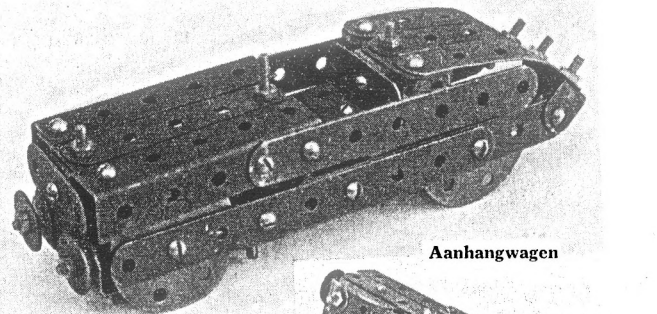
#No of pages: 12 plus covers. #Printing: cover is orange and fawn with orange, blue and fawn lettering. #Page No of Parts List/Set Contents: 12 for Set 3. #Sets covered: 1+2. #No of models for each set: 13 plus 2 for more than one each of Sets 1 and 2. #Name, Page No of first & last model: Briefweger,2. Kruisboog,9. #Other notes: This is Modelboek 2. Photos of 5 models that need Set 3 are shown on pp 10-11.



DIT MODEL IS GEMAAKT UIT 2 DOZEN 1 EN 2 DOZEN 2



PLAAT
Pl. 15



DEZE MODELLEN ZIJN
GEMAAKT UIT DOOS 1 EN 2



FLENSWIELEN
Fw 30



FLENSWIELEN
Fw 20



HOEKEN
H 1



BEUGELS

B 2



SLEUTELS

NEW SYSTEM, BOYCOY Malcolm Hanson was the first to come across this Set, complete and with Manual, and a few months later another turned up, nearly complete but the Manual was missing, so Malcolm kindly gave me a copy of his. BOYCOY is an unusual Set in several ways, and probably dates from soon after WW2: provisional patents 22849/46 and 28936/46 are claimed on the front cover of the Manual. The Set is referred to as No.3 in the Manual, and 'Other smaller Sets will be made available shortly.' The manufacturer was Messrs. Boycoy Ltd., 95/97 Queensway, Bayswater, London, W.2.

The Set is packed in a stoutly made steel box with a hinged lid; overall it's 6x6x7" high and weighs over a kilo empty. It is almost certainly ex-WD and has a sprayed silver finish with stencilled on the front in red, 'BOYCOY | TUBULAR CONSTRUCTION | SET FOR BOYS', and a ruler with centimetre and inch markings. Clipped inside the lid is the blueprint below.

Occupying all the space inside the box is a container (below right) made of dark brown 'cardboard composition' and held together by staples. As can be seen it contains a Drawer and 4 tubes, called Rollers. The latter house many of the Tubes in the Set and are also proposed for models, mounted as shown in the sketch below. The text alongside mentions a Steam Roller and a Printing Press - neither is shown in the Manual but a model on the back cover has two Rollers and might be the Press.

The parts in the Set are mostly Tubes and Clips, all nickel plated. The Tubes are .250" od and are rolled from steel about .028" thick for the longer ones, down to .020" for short lengths. There are 56 Tubes altogether ranging from 5/8" to 1 1/4" in length, plus 8 which have a short outer tube spot welded over the end. The 1/4" tubes are a snug fit in the latter and this is the only way in which the Tubes can be joined together in line. They are joined crossways (or in line but one above the other) by J-Clips (called Clips with claw), and there are also U-Clips (Clips clawless) in which Tubes can rotate. In the blueprint a hole is shown in the side of the J-Clip which isn't in the actual Clips, and there is a tapped hole in the bottom of the U-Clip as well as in one of the sides. The thread is 4BA and the standard brass Screws in the Set varied in length from 5/16" to 7/16". There are 50 Clips in all.

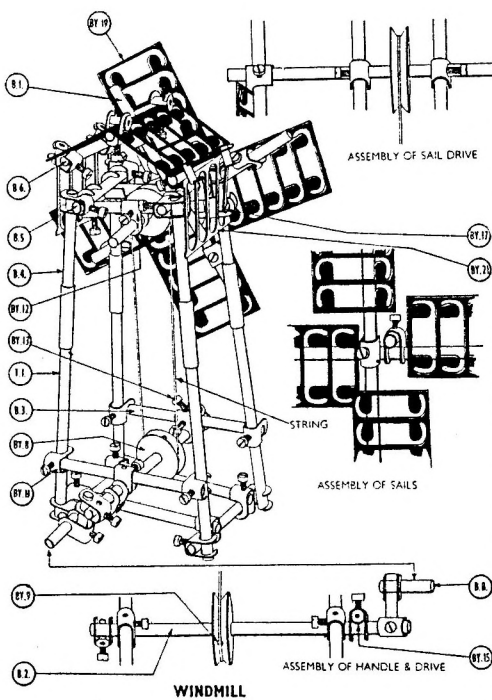
Waste was frowned on during and after WW2 and some

short lengths of the 1 3/4" wide steel strip from which the Clips have been stamped out, are included in the Set and are called Plates. There are 6 with the J cutouts, painted red, and 2 with the U, nicked. They can be attached to the Tubes with the J-Clips and can be clamped together using the 1/2" brass Washers supplied, although there are only 6 Nuts in the Set.

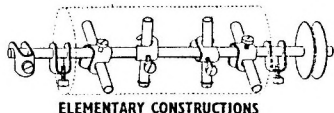
Four 1 1/8" solid brass turned Pulleys, 5/16" wide, are included and they can be made fast to a Tube by a Grub Screw in the throat. Minor parts include Rubber Bands, 3/16x1/2" hollow alloy, flat headed Rivets which are internally tapped 4BA for part of their length, and 3/32x3/4" copper roundhead Rivets. As far as I can see these Rivets are used as packing in the Clips when, for example, two of the Plates are being joined at an angle; but I haven't sussed out the reason for the internal thread.

The 12 page manual shows 11 models and it is easy to see how the simpler ones are assembled, a Swing and a See-Saw for instance. It wasn't so easy with some of the larger models but they are all simple mechanically and one could achieve the desired end without following the manual in detail. I made a Crane based on one in the Manual and it is quite pleasing in appearance though inevitably the Clips do look rather clumsy, and the long Screws in them don't help. All the parts are well made and the Clips hold the Tubes securely, and are easy to use. There are quite a few systems in MCS that use rods or tubes as the main members and two of them use J-clips to hold them together. That's to say ROBO and (the identical?) EL INGENIERO MECANICO - but they're very simple systems using rods rather than tubes. In effect the diecast BOB Joints and the slotted MOBILO U-clip do the same work as the J-clip. Again they use rods and although the BOB Joint look neater, it might not if made large enough to accommodate 1/4" tubes.

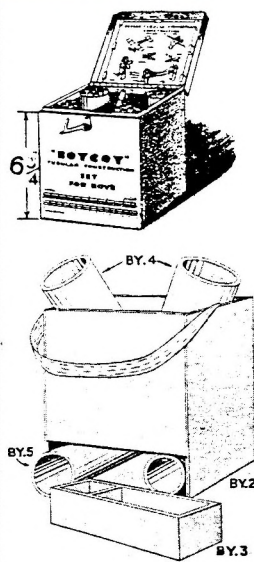
SUMMARY OF MANUAL. #Name: BOYCOY #Details of maker: BOYCOY LTD., 95/97, QUEENSWAY, BAYSWATER, LONDON, W.2. #Dates &/or Ref Nos: none except Patent Nos on cover end in /46. #Page size: 133x139mm deep. #No of pages: 12 inc covers. No page nos. #Language: English. #Printing: cover and models are B&W line drawings with some details in red. #Page No of Parts List/Set Contents & highest PN: 2 (illustrations on p11), T.4. #Sets covered: one, called No.3. #No of models: 11. #Name, Page No of first & last model: SEE-SAW,3; JIB CRANE,10. [no Model Nos] #Notes: details above were taken from a photocopy.



INTERNAL ASSEMBLY FOR MOUNTING ROLLERS FOR USE IN STEAM ROLLER, PRINTING PRESS, ETC.



'BOYCOY' TUBULAR ENGINEERING CONSTRUCTION.
PROV. PAT: No 22849/46.



MORE ON STEEL TEC There has been quite an amount of interest in this new system, and my thanks to all who have sent comments or information. The main points are covered below, and I've added one or two remarks in square brackets.

From **Al Sternagle**. The smaller sets were on sale before Xmas but were pulled from the shelves with no explanation. The parts are for the most part well made but the main attraction was the price, less than half that of MECCANO-ERECTOR, for comparable sized boxes at least, and STEEL TEC was available in many more stores.

From **Keith Cameron**. I enclose a copy of the No.4 manual front cover; note that the lower left model, an 'Off-road Super Sport', is different to the one on your No.6 cover. [The No.6 model is a Dump Truck: the No.4 is identical to one of the No.3 models, and with the same title.] I bought a No.4 for \$20, a bargain. The motor casing resembles the MECCANO version but the motor itself runs faster, has less power, and consumes more current. The battery box has a much neater reversing switch than the MECCANO equivalent. There is no provision for 4-cell operation which is intentional, I'm sure, because the motor is rated for lower voltage, and is not called on to operate larger models, as in the MECCANO range.

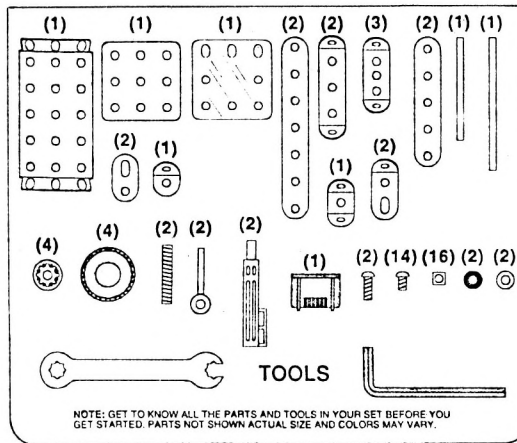
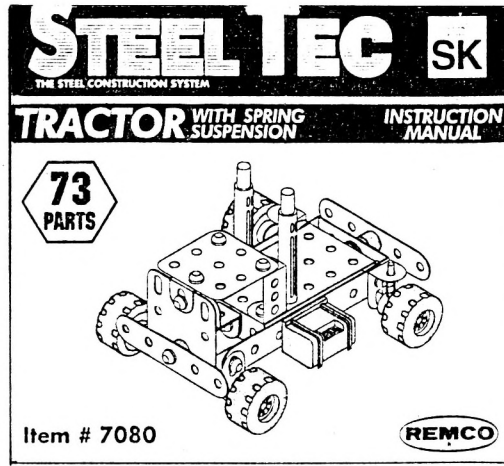
I enclose the end papers for the No.1 'Dump Truck' which sells for \$9.95. The Girder Bracket is shown correctly, two holes missing [see 10/242], in the 'Parts Identification', but incorrectly in the model diagrams. Note especially that the manuals have *English explanations*. The MECCANO/ ERECTOR manuals are devoid of written instructions, although in the USA there is now a special 'Introduction Manual' in English. Note also the cute REMCO boy with the hard hat. Meccano/Erector also now have a young engineer, similarly engaged, and with a red shirt, the traditional Erector colour.



Then there are even smaller models in little bubble packs. I enclose a copy of the single sheet of instructions from the 'Tractor', which includes the contents. [see above] There are at least six in this series, they all bear the designation 'SK' and this one set me back \$4.86. Note the 1/2"x1 1/2" Transparent Plate and the [imitation] Battery Box. The Plastic Pulleys are the same size as p/n 23 and have boss-like projections that are a force fit on the rod. The tyres are 1" o.d. [The Set is Item # 7080 and has ©1993 on it.]

I also bought the 'Power Wrench' (\$9.95) and found it worked well. The small motor is geared down, so one gets

plenty of power but rather slow speed. The bits are magnetic, so stay in place nicely; they are quite useful used by themselves, giving one a handy, quick way of placing grubscrews and bolts.



From **Anton Calleia**. It may interest you to know that I understand from Meccano that the lawsuit which Meccano had filed against Remco, seeking to enjoin the latter from using the Meccano and Erector trademarks in the marketing of STEEL TEC, has been resolved with an out-of-court settlement proposed by Remco. It stipulates that Remco will eliminate any and all references to Meccano and/or Erector in the marketing (packaging) of STEEL TEC. Judging by the STEEL TEC boxes I've seen recently [May] in a neighborhood supermarket, the agreement is already in effect.

From **Josep Moreno**. The full address of Remco Toys is: 1107 Broadway, Ste. 808 | New York, NY 10010. Tel: 212-675-3427; Fax: 212-243-4271. International distribution of all Remco products is carried out by Carousel Properties, 103 Norfield Road, Weston, CT. 06883, U.S.A. Tel/Fax: (203) 222 8045/8976. They told me that their agent in Spain is Bizak, PO Box 1387, Ctra Bibao Galdacano, 32 Bolueta, 48004 Bilbao. Attn: Carlos Ortega. Tel/Fax; 34 4 412 1500/473 0609.

I have been able to obtain a Set 1, and Sets 2, 3 and 4; Sets 5 and 6 are not yet in Spain but I hope to have them shortly. I've also the Storage Case which is very nice, and the Power Wrench, which is of doubtful service. The appearance of the parts is good but there is an excess of paint on some. Most of the parts are stamped STEEL TEC and some REMCO: the former have a better appearance than the latter. The N&B are difficult to screw up, perhaps because their plating is too thick. The friction motor for the elementary models is good for young modellers. [Kendrick Bisset had (different) problems with his N&B (10/242), whereas the ones in my Sets are fine, so it looks like a question of quality control. Perhaps the Wrench would have been more satisfactory if the N&B had been better?]

MORE THREADS Richard Symonds sent some details from a reference manual which included the list of B.S. (British Standard) Cycle Threads given below. They have the same 60° Angle as the CEI range given in 7/169, but there are many more sizes, including those for various wire gauges (s.w.g. is Standard Wire Gauge). Not all the tpi correspond to the CEI ones and hence all the B.S. threads have been included.

Diameter (in.)		tpi			
Nominal	Actual				
		.116 (11 s.w.g.)	.128	44	
		.128 (10 s.w.g.)	.141	40	
.064 (16 s.w.g.)	.074	5/32	.156	32	
.072 (15 s.w.g.)	.081	56	.144 (9 s.w.g.)	.157	40
.080 (14 s.w.g.)	.090	56	.160 (8 s.w.g.)	.177	32
.092 (13 s.w.g.)	.102	56	3/16	.188	32
.104 (12 s.w.g.)	.114	56	7/32	.219	26
1/8	.125	40	1/4	.250	26

MORE ON AMERICAN MODEL BUILDER Following the piece by Don Redmond in OSN 9 several readers have been kind enough to send material, including some parts and copies of manuals. Let's start with the **Parts** sent by Kendrick Bisset and Richard Symonds. Generally they corresponded to those described by Don but the following points were noted:

- Bosses were either 5/16" or 3/8" dia (up to .385"), and all were single tapped and nickel plated. The 2 examples seen of the 3/8 size were both brass but of the 7 smaller ones, 5 were steel and 2 brass. In most cases they were a snug fit on AMB Axles and MECCANO Rods wouldn't go through.
- The 2 25-hole AVGs were a little thicker than Don's, with one at .031" and the other .035". There were also 2 of 15 holes although this size is not shown in any of the Parts Lists: they looked the same as the others and both were of .031" steel.
- Of all the Plates only the Flanged Sector had rounded corners (17/64"r). The thickness of the steel in all was between .027 and .030" except for a pair of 3 1/2" Flat Plates, and a pair of ribbed #32 (7x5-h Flgd Plate) - all of those were .020". The centre lines of the cross holes in the Flanged Plate were normal to the line of the longitudinal central row. The slots in the flanges of the Flanged Plates are about 9mm deep, much more than the 6.5mm of MECCANO parts, and the flanges themselves are deeper, around 16mm.
- The lengths given for the Cranks are measured overall and the cross hole in the examples of #19 and 20 seen was about 1 1/2" from the bend remote from the handle end. In the introduction to one of the manuals to be described later, which possibly dates from 1914, it is stated that all Cranks are drilled and so are the 4 1/2" and 5 1/2" Axle Rods. There isn't a 5 1/2" listed so perhaps that should be 5".
- The Ratchet Pawl, #41, is smaller than might be thought from the illustration in MCS, the width of the mounting plate is 1/2", and the length overall is 1.7". • The throw of the Engine Crank, #64, is about 7/8". • The edges of #67 are 1/16" deep lips, formed upwards on the vertical arm and downwards on the others. • #68 Bolster Plate, is a Double Bent Strip with the centre portion about 3/16" deep. • #69, the Auto Wheel, is 2" dia and is a pressed 'half wheel/tyre' with a boss on the inside.
- Of the parts examined all were of steel except the bosses mentioned above, and all the parts were nickel plated: however no gears have been seen. In a photo of AMB parts that Richard sent, nearly all the parts, including all the gears save #73, which isn't there, are nickel, but the Bush Wheel and Pulleys #2 and 4 are brass coloured. In the '1914' manual referred to above, it says that every part is nickel plated and that all the rotating parts have a brass 'Collar' with a case hardened Set Screw cupped at the end.
- On the gears Al Sternagle mentioned that he has used them quite extensively and they are quite good, better than the coarser ERECTOR gears of the day.

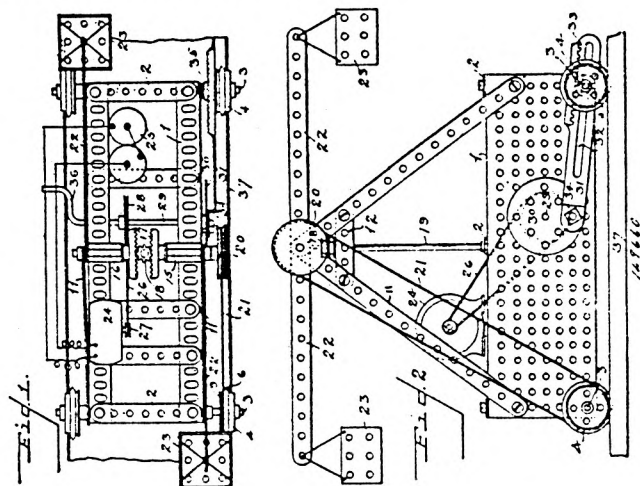
Still on parts Don sent a copy of a summary of a Canadian AMB Patent in the name of Frank A. Wagner; it is dated July 1913, and had been filed in October 1912. The illustration opposite is accompanied by 9 paragraphs of text which seem largely repetitive but cover the Oscillating Rack and Eccentric Wheel, and also the Flanged Pulley Wheel. Don wrote that Lou Boselli had told him that some AMB parts, including the Rack, were used in the cash registers that were Wagner's original business. On the Flanged Pulley one paragraph of the Patent reads: 'In a mechanical toy, a traction wheel having a tread and a rail flange, a disc having a

flange which together with the rail flange forms a pulley wheel, and a shouldered hub passing through the wheel and disc and engaging therewith to secure them together'. That description describes Hornby's PN 20 which had been made from 2 parts joined by a boss since 1911 and it would have been ironic if Meccano were infringing Wagner's patent in Canada after mid 1913. Perhaps the fact that Hornby also joined the parts through eyeletting the holes in the face, as well as by the boss, would have made a difference. The Patent sketch contains several parts such as the 7x23-h side plate that as far as is known, were never included in AMB's range.

Ike Ascher sent parts from 3 **Manuals** which someone in the past had carefully bound up together. The earliest is a single leaf showing #1 models from a manual which I'll refer to as the '1912': it must be from about then to fit in with the others to be described. It stood out because there's no slogan at the bottom of the page, just 'The Toy for the Boy' motto at the top of alternate pages. Nor is there mention that the models could be made from the 0 and 0 1/2 Outfits combined, just the #1 Set was named. Most of the next Manual was included and again to fit in with the next manual I'll call this the '1913'. It doesn't contain anything to date it positively and unfortunately the pages containing the Parts List are missing, but there is no sign anywhere of the additional range of parts, the ones shown on p3/4a of MCS/FB, that are said to have been introduced in 1915. Each page has the 'Half the Fun ...' slogan at the bottom as well as the motto at the top as before. There is still no mention of the #0 Outfit. It is explained on p25 that this was a Supplementary Booklet showing new models selected because of the new principles they demonstrate. One other feature is that the models are not in Model No. order, thus the 3 #7 models on pp 22-25 are numbered 148, 141 and 144. On the last remaining page there are ads for Transformers #400 and 425, and also the **Geared Countershaft** shown opposite. It is said that its sides are cast iron, mounted on a black enamelled base, and the axle is 1/8" dia with three 1" and one 1 1/2" pulleys, all of which are adjustable on the shaft. The gears seem to have 14 and 70 teeth, the same as standard AMB, but there are no cutouts, #73 style, in the large gear.

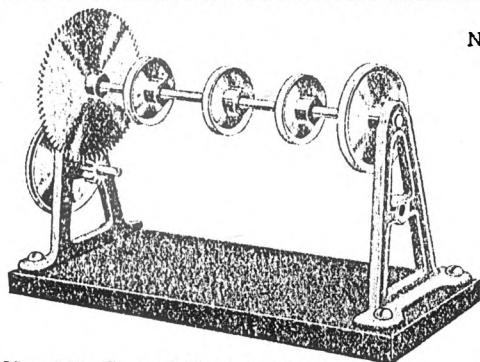
Next in chronological order is a copy of a complete manual from Richard Symonds. It has 'Copyright 1913' and 'Patented in Canada July 29, 1913' on the cover, and inside on p1 is 'Copyright 1914'. There is also mention on p2 of a competition with a closing date of April 1915. I think it would be fair to call this the '1914' manual. The Illustrated

No. 149,660. Toy. Jouet.



Parts shows the early range except that the MECCANO-style Pawl shown in MCS/NZ, that was used initially, has been replaced by the swinging type peculiar to AMB. The ads at the back include the Transformers and the Countershaft, and also 3 **Electric Motors** (below right), the #200 at \$2.25, the #300 at \$2.75, and the #325 at \$12.50. The first two would run from 2 dry cells or from one of the Transformers, and were made of 'solid cast steel' mounted on a steel base. The 200 had a 3-pole armature 1-3/8" dia, and was 3 3/4" high; the armature of the 300 was 6-pole, and it was 4 1/2" in height. The 325 is described as a Universal Motor which would run on 110 volts a.c. or d.c., and developed 1/100 H.P. It weighed 5 lb, was 3 3/4" high by 4 1/2" overall, and was fitted with 2 large grease cups with felt wicks.

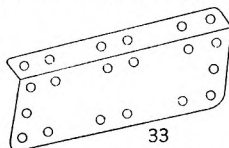
Ike's final part shows the later parts in many of the models including the ribbed Plates. There is also a reference in the instructions for a Zeppelin model, to 'the present European warfare', which probably means the manual was prepared before America entered WW1 - I'll call it 'early 1915' because it fits between the '1914' and the next manual. Where a motor is used in the models in this manual, it is the No. 150, a different type to those mentioned earlier. It can be seen in some of the models on the back cover of this Issue.



No. 350 Geared Countershaft

It looks to me as if the casing is pressed steel, cheaper no doubt than the earlier castings.

Finally copies of some pages from Don. 'Copyright 1915' has been rubber stamped at the bottom of the title page and I'll call this manual 'late 1915'. 'Late' because the Flanged Sector Plate (#33) has been replaced in the illustrated parts by a Universal Plate with the same PN. Underneath it says, 'We have discontinued the old Sector Plate and are now furnishing our new Universal Plate'. Readers may recognise this as Mystery Part No.20 (9/222, 10/259), and the oversize holes noted for it no doubt allow a pair to be used instead of one Sector Plate - and in the Contents pairs of the new part replace every old style No.33. Don suggests that Wagner may have thought it wise to withdraw the Sector Plate in view of the Hornby lawsuit.



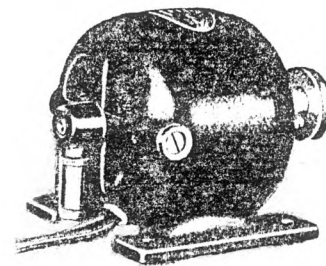
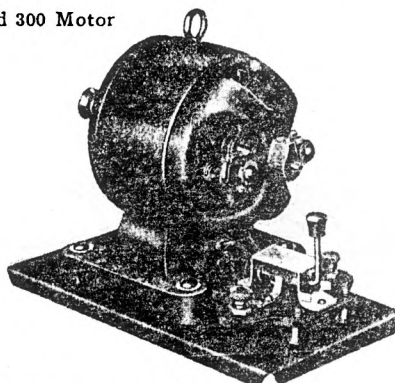
As in MCS/FB, the list of sets in this manual includes Special Outfits Nos. 11, 12 and 13, and it is stated that their contents are exactly the same as Nos. 1, 2 and 3 except that a No.150 Motor is included in each set.

Finally a few words about the **Models**. Some of them have a familiar MECCANO look to them, but the majority are more or less different. Quite a few look attractive to me, but in many cases though the good looks result from curving Strips. Mechanically they aren't that adventurous with centre pivot steering, a few simple reversing gearboxes, and some gear trains to reduce the speed of the motors. Only one of the large models in the '1914' manual is motor driven but in

the 'early 1915' a number of the large and medium size models are, sometimes by a freestanding motor with a pulley drive to a convenient shaft, but in many cases the motor is integrated into the design.

The #7 models in the earlier manuals aren't generally anything special, the almost obligatory London Tower Bridge and an Eiffel Tower which doesn't even start to resemble the real thing. But one or two are much better including a very effective Coal Hoist with a working grab. There are larger and more complex models in the 'early 1915' manual, the Aeroscope for example (see back cover), and there's a 4' high Vertical Cross Compound Blowing Engine. Also a free standing Clock some 5' high, with roman numerals on the face made from Strips - the mechanism from it is reproduced below. It is said to run for 2 hours on one winding with a weight consisting of some 10 or 20 Strips. That doesn't sound impossible given that the escapement consists of Angle Brackets engaging a 1 1/2" Sprocket but I suspect that all is not what it might seem. The manual is right in saying that 'the hour hand' will move from one figure to the next while the minute hand is making one complete revolution of the face' (well nearly right, the ratio between the hands is $(70/20)^2$, that is 12 1/4:1), but what isn't said is

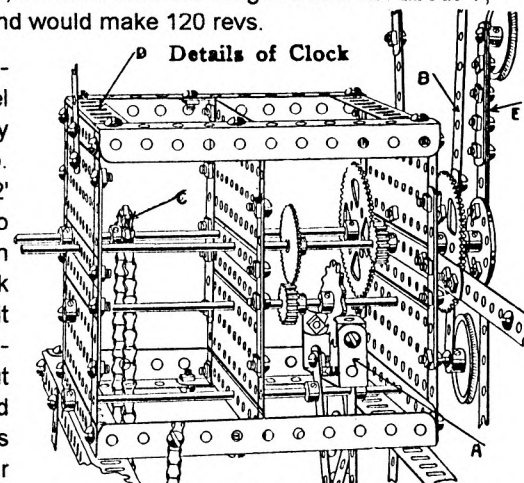
No. 200 and 300 Motor



No. 325 Motor

that, as far as I can see, with the gearing shown, the minute hand makes 1 rev in approximately 1 minute. The pendulum is about the right length to tick seconds so the scape wheel shaft will make 1 rev in about half a minute; and the shaft above, which carries the minute hand, will take 1 minute. In 2 hours, in which time the weight would fall about 4', the minute hand would make 120 revs.

Another intriguing model is the Library (table) Lamp. It's about 2' high and to quote, 'when the framework is completed it is only necessary to cut some old pieces of glass into triangular and square shapes and fit these between the Strips "B" and "C".' Then the glass is to be decorated using transparent art glass paper and 'Boys! this will make an elegant surprise for your parents for Xmas.' And it does look very nice, there is a photo of it, the only one in the manuals seen. It is suggested that a lamp like that would cost \$10 or \$15 in a store but to make it would only cost about \$1.50 'in addition to the cost of the few Strips and Plates which are used.' I priced these at over \$6 from the Price List in the '1914'



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: SCOOONER,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 1916' 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.

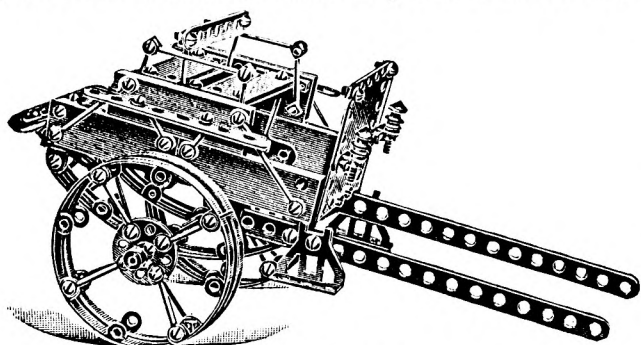
'late 1916' The title page has some fanciful floral artwork at each side and the slogan in the '1914,' 'Makes Mechanics Easy', has been replaced by 'Educational and Highly Entertaining'. The illustrations and list of parts on pp 78-79 are exactly as in MCS/FB except for the change to Part 33. Likewise 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

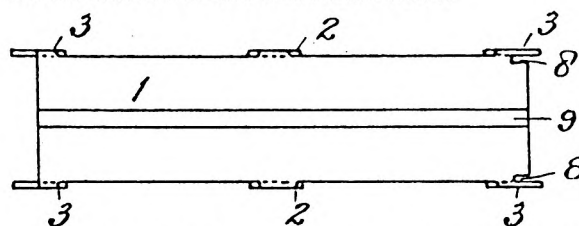


No. 1000. Dog Cart.

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.

NEW SYSTEM - METALLIRAKENNUSSARJA Ivor Ellard bought this little Set when he was in Finland in 1993, and kindly lent it to me for this write-up. Its name is a bit of a mouthful so I'll call it MJA. The parts are packed in a smart orange plastic box (10½x6¼x1"), covered by an attractive card sleeve in full colour (below x½). It carries the Finnish MJA name plus in smaller letters, the Swedish 'METALLBYGGSATS', which means Metal Construction Set. There is also the '200', presumably the Set No. All the text on the sleeve, and on the single sided A4 size Model Leaflet, is in the two languages and the Importer is named as BRIO SCANDITÖY. And below in English is 'Made in Estonia'. To add a little interest for those of us who try to classify such sets, the Lettish name MEHANISKAIS KONSTRUKTORS · 2 'SKOLNIEKS' is moulded into the box lid, together with the equivalent in Russian.



The parts in the Set appear to be identical to those in ELEKTROMECHANISKAIS KONSTRUKTORS (EMK), described in 8/188, and from the same family is ELEKTRISKAIS KONSTRUKTORS 3 'SKOLNIEKS' (EKS) (2/15, 4/54). So in the days of the USSR, this Set may have been made in Latvia, or for the Latvian market, and is now made in Estonia, though whether by the original maker is not known.

The Set contents include 11, 7, 5 and 3-hole Strips, 34 in all; 13 DAS, one 5x11 and two 5x3-hole Flanged Plates; two 5x5 and ten 5x3-hole Flexible Plates; and some 50 N&B. Those are the main metal parts; all the Pulleys are plastic with two each of 75 and 50mm dia, six 25mm and three 15mm without boss. There are 4 black plastic Tyres for the 25mm Pulleys. Pegs are moulded into the base of the box to take all the Pulleys except the 75mm ones, and a plastic plate fits into the large Flanged Plate and again has pegs to carry the Strips.

The parts are as described for EMK in OSN 8 - only additional points of interest follow:

- Strips are 12.0mm wide, slightly less than the 12.5mm hole pitch, and have fully radiused ends. The end holes in the Curved Strips are very large, 5.7mm dia and the slotted holes next to them are 10mm long.
- End slots in the 5x3-hole Flanged Plates are 9½mm long.
- The 75mm Pulley has 4 long (17mm) radial slots in its face. The mystery of how the Pulleys are held to the Axles is solved: there is a 5½" length of 3mm square rubber strip in the Set and if a suitable length of this is pushed up into the internal keyway (see OSN 8), the Axle can then be

pushed through from the boss side, and the rubber jams the Pulley to the Axle. The grip is more than adequate for the type of models likely to be made from this Set and the slight wobble found was largely because of the oversize bore in the boss. No instructions are provided as to the use of the rubber strip.

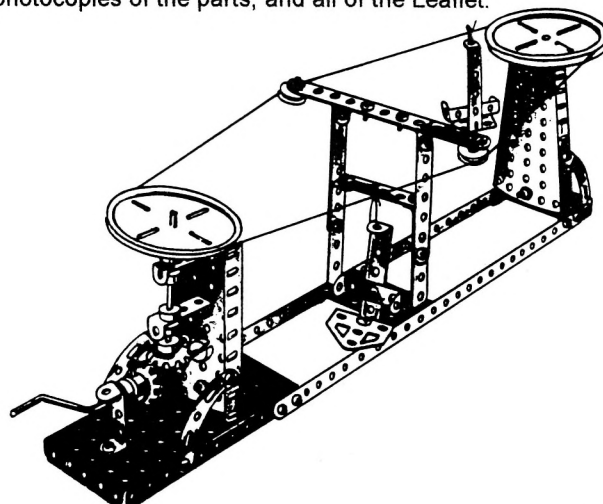
- The N&B are M4. The Nuts are thin hex, 6.9mm A/F, and the Bolts have 6.9mm dia round heads - two sizes are included, 8 and 12mm u/h. There are 21 of the latter but only 5 Nuts for them. 26 Washers are provided, 8.9mm dia and heavily dished.

- The 8 Axle Clips are of pale orange plastic and are 12mm dia discs, 5mm wide, with a radial cut to allow them to be pushed onto the Axle. The light red plastic 'weighted' Hook is far too light and the shape of the hook itself doesn't allow a Strip to be hooked on to it.

- The colour scheme is generally as EMK but the Brackets and the four Curved Strips have an unusual brown metallic finish with parallel narrow streaky stripes of a lighter colour spaced about 1mm apart. Some of the yellow parts are in the dull '78 MECCANO shade and others are the richer 1970 hue. The BZP of the Strips and tools is dull and most of the parts are heavily discoloured with an iridescent look to them.

The Leaflet in the Set is in black and white with a single line drawing of each model - it looks as if it has been photocopied. 9 models are shown although 15 are claimed on the plastic box lid. No doubt this was true for the original Russian/Latvian version, which probably, like the EMK and EKS Sets, had a proper manual. Of the models on the Leaflet all but two need parts, such as trunnions, gears, triangular plates, which are not in the Set and so it is likely that the original Contents differed from those found. Or maybe there's been a mix up over the Models because several models are shown with 25-hole Strips which would be longer than the length of the plastic container. The model shown below is one of the more complicated ones.

Extra MCS Sheets contain full details of the Set Contents, photocopies of the parts, and all of the Leaflet.



ELGIN and the ALUMINIUM CONSTRUCTION OUTFIT.

These are two very small systems with in the largest set known, just 47 parts plus N&B. Nearly all the parts are made of light alloy and the only major model shown for each Set, illustrated below, is featured on the box lid. This account is based on two sets still strung in their boxes, a No.A ACO, shown to me by Geoff Wright, and a No.0 ELGIN, which came my way through the good offices of Malcolm Hanson, who incidentally has an identical Set. Apart from the N&B, the parts in these two Sets are either identical or, for parts that are not in both sets, are clearly from the same maker. This to some extent contradicts what is in MCS so let's review that first. Referring to the FB version, ELGIN p2 shows the box lid; p1, the data page, talks of Strips 10mm wide with 5mm holes spaced at 15mm and says they are similar to those of PHANTASIE. The dimensions are about right for the latter and I suspect that there has been a mix up, perhaps arising from the narrow looking Strips shown in the model on the box. At any rate the Strips found were well over 1/2" wide, and had holes of near 3.9mm, spaced at 12.7mm. Pages 5 and 6 are identical to the two sides of the leaflet found in the ELGIN Set, note that the name on it is 'Aluminium Construction Outfit.'

Turning now to that system in MCS/FB, there is just the one page of data, and although I would dispute one or two of the numbers given there on the basis of the 'A' Set, the real difficulty is over the set numbering. The leaflet found in the A Set was identical to the ELGIN one except for very minor changes in layout and a slightly different typeface, and, as for the ELGIN, gives the contents of Sets 0 and 1, with no mention of any other sets; and in MCS it is stated that Sets No.0 and 1 have been seen. So where does Set A fit in? All that can be said is that its contents are exactly those of the No.1 Set given in the Leaflets. Incidentally the contents given on the Leaflet for the No.0 Set correspond to the actual contents of the Set except that the 1x2x1 DAS in the List was not found, instead there was a 1x3x1 which is the size needed for the model. One odd thing about the A Set is that the model on its lid shows all the parts with square corners, whereas the actual parts, like the ELGIN ones, and those in the model on the ELGIN's lid, all have rounded corners, apart from the Gusset Plates (Flat Trunnions). And it's the same on the Leaflets, the 4 small models there have parts with square corners.

Now a few notes on the Sets and the parts:

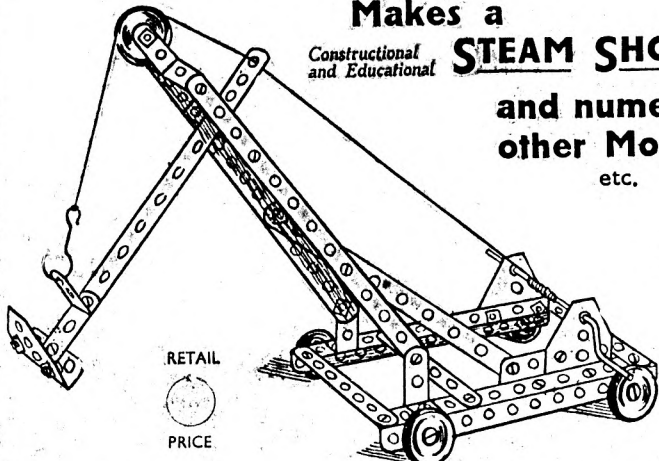
- The ELGIN box measures 7.8x9.3", the ACO 15.2x9.4": both have two layers of parts strung onto brown and blue card respectively, with thin red cord. There's a price of 18/6 written on the lid of the ACO.
- With the few exceptions noted below all the parts are aluminium alloy; on the ACO lid there is a reference to Alklad, which is probably what I remember as Alclad, aluminium alloy thinly coated on both sides with pure aluminium. None of the parts have any but round holes.
- Strips are about 14mm wide and are .038" thick, the ends have a 3/8" radius, as do the Brackets. A/Gs are

14x14mm, 22 thou thick, and the ends have various radii, often 1/4" but sometimes foreshortened depending on the amount of metal left outside the end hole. The Flat Trunnions too are .022" thick and have 5 holes, no cutouts, and sharp corners. Burrs could be felt on some parts and a few were slightly inaccurately made, but not to the extent noted in the Comments on ACO in MCS.

- The Pulleys have an ali eyelet at the centre, they are 1-1/8" dia. and 1/4" across the top of the Vee. The 1" balloon type Wheels are made from two pressings, again held by an eyelet.
- The dia of the Crank Handle is 3.18mm, both it and the Hook are made of copper coated Steel. The latter is 1 1/2" overall and is made of .063" wire.
- The thread of the N&B is 4BA. Nuts are hexagonal, 8.0mm A/F pressed brass, 2.3mm thick, in the ACO; 6.3mm A/F machined steel, dull grey plated, 3.7mm thick, in the ELGIN. Bolts are all cheeseheaded, 6.2mm dia, and of plain steel, 5/8" u/h in the ACO, and 3/8" in the ELGIN. The


The **ELGIN** E-ZE-KIT Series

Makes a
Constructional and Educational **STEAM SHOVEL**
and numerous other Models, etc.



Made in England.

RETAIL PRICE



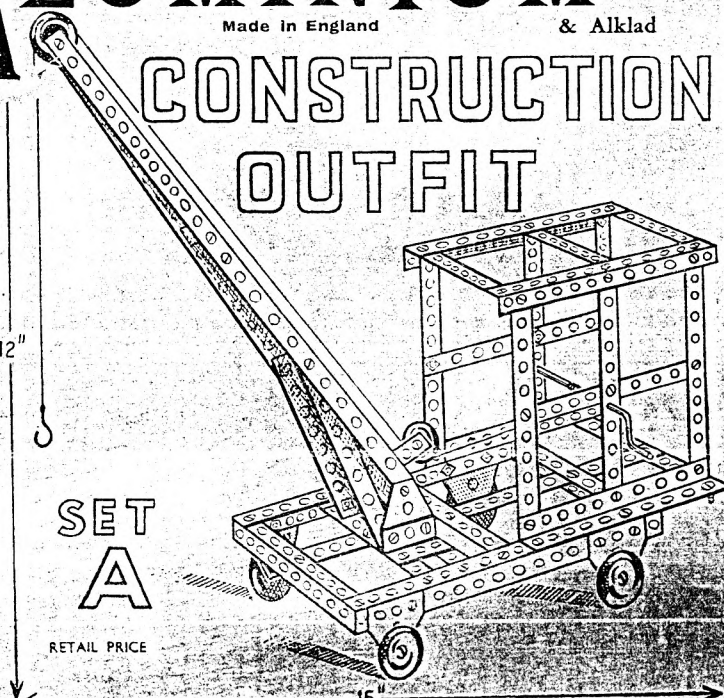
RUSTPROOF

SET "O"

DURABLE

ALUMINIUM CONSTRUCTION OUTFIT

Made in England & Alklad



12" RETAIL PRICE 15"

SET A

N&B are packed in small brown packets in the ELGIN but in the ACO they're in small Elastoplast First Aid Dressings packets with the date 1945 on them. No doubt surplus from WW2.

• There were no tools in either Set and no obvious place for them.

I've been able to photocopy the ELGIN parts for an Extra MCS Sheet, also the box lid for ACO. MCS gives no date for ELGIN but suggests 1954 as the start of ACO. Unless there's evidence for it I would have thought mid to late 40s

might be more likely: the Elastoplast date doesn't prove anything but I think such packaging, while quite acceptable just after the war, would have looked out of place by 1950, in what was, if the price was originally 18/6, a not inexpensive toy. Also Alclad was widely used in the aircraft industry during the war and there was a lot about just afterwards when orders for aircraft were cut overnight. What better use for it than to make toys, for a market which hadn't seen new ones for years, and would pay a high price for anything that looked something like the part.

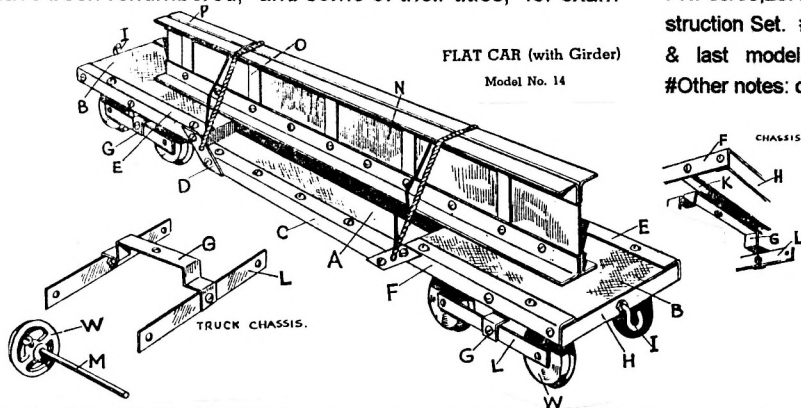
JUNEERO MADE IN CANADA Richard Symonds sent a copy of a JUNEERO 40 page Instruction Book which has along the bottom of its cover 'Manufactured by THE STEELMASTER COMPANY LIMITED, Vancouver, Canada'; and on the back cover the address is given: 950 S. W. Marine Drive, Vancouver, B. C. Inside there is a reference to the JUNEERO 'Master Model Construction Set', that is said to be useful to adults in the home etc, as well as to boys for model making. The Tool looks identical to the UK one although the purchaser had to mount it on its Base with the Screws provided. A Patent No.411968 is shown under a picture of it.

No Set Contents are given but there is a List of Parts, 20 in all, and each is illustrated. No surprises, Strip, Angle, Sheet, Rod, N&B, Pulleys, Tires, Springs (assorted), Snips, Tap, Scroll Tool. etc. They have different PNs but all look like standard JUNEERO except perhaps the Spanner, below, which I don't recall as a UK pattern. No gears are included.

⑪ 1—Spanner



There are 22 models shown, each with a line drawing of the completed model and sometimes details of it, plus, for all but the simplest, dimensioned blue prints of the individual parts. They range from a Menu Card Holder to a Travelling Gantry Crane, and all are UK designs although again they have been renumbered, and some of their titles, for exam-



ple that of the model shown below, have been changed too. None of the models are road vehicles and Tires are not used in any of them.

No dates are given but the Tool is the modified pattern that was introduced in 1940, and there is no mention of the XAKTO Gauge that was included in UK outfits from 1948. (For details see 8/176, 9/216) Early postwar seems the most likely period, perhaps before the range of gears was introduced in the UK.

The JUNEERO ENGINEER'S CLUB OF CANADA is mentioned twice in the manual and for 25c you received a badge and news of contests and new designs. It is said that 'Juneero Clubs exist in Great Britain and other parts of the world and are an ever-ending [sic] source of pleasure and enjoyment to the members bringing together young and old alike in a bond of inventive creative effort.

This Canadian JUNEERO seems to me to deserve more than a footnote in MCS, so I've called it JUNEERO (2) and Extra MCS Sheets give all known details.

SUMMARY OF MANUAL. #Name: JUNEERO. #Details of maker: The Steelmaster Company Limited, 950 S. W. Marine Drive, Vancouver, B.C., Canada. #Dates &/or Ref Nos: None. #Page size: 227x148mm deep. #No of pages: 40 inc covers. No page numbers. #Language: English. #Printing: Line drawings of models and blue-prints of their parts. #Page Nos of Parts List/Illustrations & highest PN: 39/38,20. #No Set Contents. #Sets covered: Master Model Construction Set. #No of models: 22. #Name, Model No, Page No of first & last model: TICKET HOLDERS,1,8; FERRIS WHEEL,22,36. #Other notes: details above taken from a photocopy.



MYSTERY PART No.19 Richard Symonds wrote that the Strips with the alternate round and square holes (10/259) were reported in various lengths by the British Columbia M.C. in 1982, and a 5-hole one was illustrated. Since then he sent a photo of all the different parts of this type that he has - there are 3, 5, 7, 9, 11 and 27-hole Strips; 5 and 11h A/G; 2x5x2 and 2x1x2 DAS; and Perf Plates, 5x7 and 5x11h. The illustration is of a 3h Strip he kindly enclosed.



MYSTERY PART No.20 The 4x1½" Plate with one ½" flange (10/259). Don Redmond solved this one with a copy of a page from an AMB manual which showed the part: it replaced their Flanged Sector Plate in about 1915. More

details are given on p279.

MYSTERY PART No.23 A red painted aluminium Flanged Plate 1.0"x2.0", with square cornered flanges, .6" deep, on the short sides. There are no holes in the top surface but 2 of 4.5mm dia, at 12.7mm pitch, in each flange. A longer 8-hole version is also known, ie 2x4". With the Plates were three 8-hole unpainted aluminium Strips which look as if they might belong. However their holes are 4.7mm and they are of thinner metal, .035" against .040". They vary between 2 and 15 thou over ½" in width and have near fully rounded ends. Don Redmond sent these parts; Richard Symonds also has one of 2h length and wrote that both the 2 and 8h were described in a 1983 List from British Columbia Meccano Club.

NEW SYSTEM - MECOTECH As mentioned in 10/267 Don Redmond came across this name in Toronto - there were two Sets on sale, a No.1 at \$20 and a #MM2001 at \$30. This account is based on the details of the No.1 which Don supplied, plus a couple of parts and an Instruction Leaflet that he very kindly sent me. The MM reference number gives an immediate clue to the origins of MECOTECH, it's the same as that used for WISDOM etc, described in 10/238. And this is confirmed by the logo below which Don says is identical to that used on WISDOM/SAGESSE packaging. There was a packing slip in the Set which has a 'STCO' logo on it (below) and Don suggested that this might stand for Shanghai Toy Company. The owner of the shop where the Set was bought is Chinese and though vague about where the sets came from, did mention Shanghai. The packing slip also has 1992 stamped on it.



The MECOTECH No.1 box is in full colour and measures 14x10½x2"; the parts are packed in formed plastic over a corrugated card sub-form. The Model Leaflet, again in colour, carries illustrations of the different parts, 30 in all, each with a PN and the number in the set. No names are shown so I'll use MECCANO-style ones, and that's rather appropriate because a number of the parts remind one of those in the HYPERSPACE Set. In particular the large and small Missiles, the Nose Cone, and the Rocket Motor look very similar. Other plastic parts include 3x5h and 3x11h Plates, 3x5 and 5x7h Triangular Plates, a Seat Unit and Pilot, a couple of special Brackets, and push-on Wheels.

The Plates are all fairly thick, ranging from .101" for the larger Triangular, down to .060 for the 3x5 Rectangular. The latter comes in two forms, flat and permanently curved. Around each of the holes in the Triangular Plates, on both sides, are shallow recesses (counterbores), 7mm dia and some 10 or 15 thou deep. The Brackets are used to mount the Rocket Motors and the Missiles. Tongues on these parts are a push fit into slots in the Brackets. The parts are variously coloured red, blue, white, grey and yellow and their colours are in several cases different to those shown in the Leaflet.

The steel parts are confined to Brackets (1x1h, 1x2 and 1x1x1 Reversed), and 6 Strips, 2 each of 5-hole and 1x5x1 DAS, and two 5³⁄8" long, each of which has only the centre, and 2 end holes (at each end) of the possible 11 holes. There's also an Axle (.101" dia), N&B, Spanner, and Screwdriver with plastic handle. All are shown with a bright finish but in reality the Strips are painted blue. Dimensionally they are the same as WISDOM parts, except that the lugs of the DAS are bent at a different point and the width between them is 63mm against 61mm for WISDOM.

The Leaflet shows 6 models: they are all variations on a theme and one is shown opposite, together with some of the parts that can't be seen in that particular example. There are one or two coloured photos of each model and a list of the parts required; model names are in English, French and Chinese but the the only other wording: 'CONSTRUCTION SET FOR YOUNG ENGINEERS', is only in English. A sheet of self-adhesive labels provides the decor that can be seen on the various parts. All the models are powered by a Geared Motor which has an Axle as its

output shaft: power is from a plastic Battery Box with a switch built into it.

As with WISDOM Sets, the number of N&B isn't given in the Leaflet but unlike said Sets, there are two lengths of Bolt, one looks the standard WISDOM length of ¼" and the other is shown about twice as long. The round heads and the small hex Nuts look typically WISDOM, and the thread is M4, though the o.d. of the Bolts at about 3.8mm, is below normal.

SUMMARY OF MANUAL. #Name: MECOTECH #Details of maker: none. #Dates &/or Ref Nos: none. #Page size: Sheet 509x244mm deep folded into 3 (6 panels). #Language: English, plus French & Chinese for model titles. #Printing: colour halftone throughout. Title block is purple with large white, and small mauve, lettering. #Highest PN in Illustrated Parts /Set Contents: 307. #Sets covered: not stated but #1 on box lid. #No of models: 6. #Name of first & last model: MISSILE LAUNCHING VEHICLE, ROCKET FLYING BOAT. [no Model Nos.] #Other notes: a triangular WISDOM logo is at the top of 2 panels.

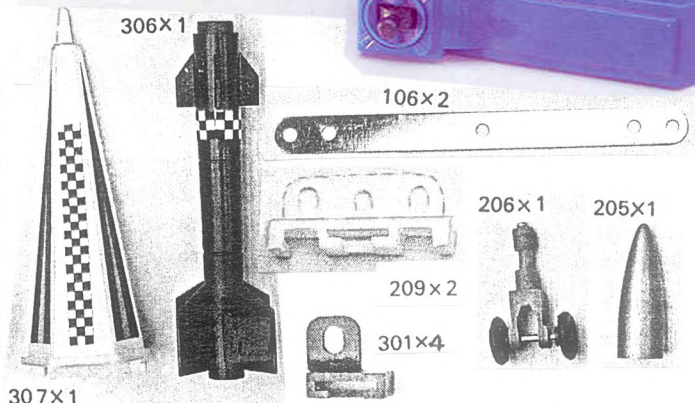
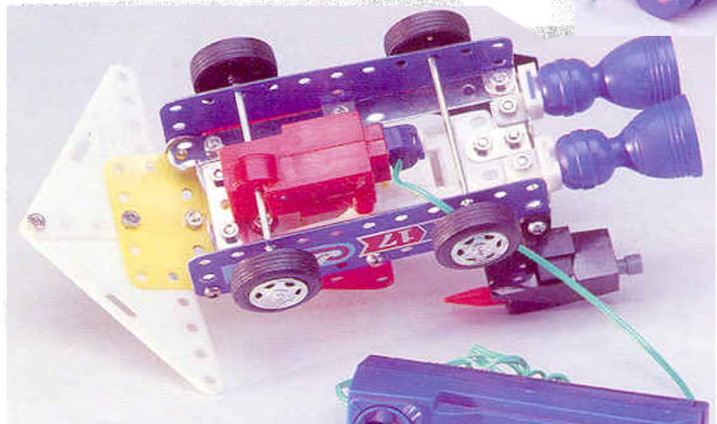


CONSTRUCTION MODEL SET MM097 In the same shop Don saw this Set which is intended for 'Peram[bulator]s and Chairs'. It has larger size metal parts and PVC seat fabric, sun cover, etc. Quite a nice made up push-chair was on display and would have been adequate for a reasonably sized doll. It was good value at \$26.50. If anyone has more details, please send them.

太空车



SPACE VEHICLE VOITURE ESPACE



NEW SYSTEM - KONSTRUKTOR UNIVERSAL'NY! That's the transliteration of the Russian name; alongside on the box and the Manual is an English version, 'TOY MECCANO UNIVERSAL', but I've preferred the original, I can't quite bring myself to use the great name for this minor, albeit rather attractive, Russian system. This is the Set that was advertised in the 'Canadian Meccano News' at \$10, and courtesy of Don Redmond I've been able to examine a couple of them and make some of the models. My thanks also to Richard Symonds for the details he sent.

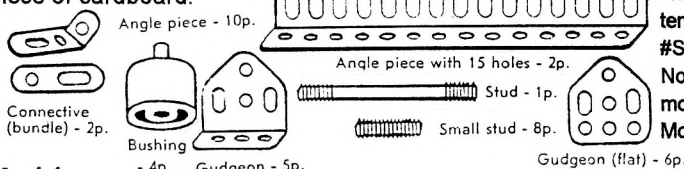
The Outfit comes in a 17½x12½x1¼" box; the lid is very colourful and shows a girl surrounded by models that can be made with the Set. Inside the parts are packed in mauve formed plastic and the initial impression is good, with gleaming nickel parts and bright red and rich blue moulded plastic components.

Including 4 tools there are 41 parts listed. The main metal ones are 64 Strips, from 3 to 15 holes long, including DAS and 8 Curved Strips; two 15h A/G; 5 Flanged Plates (5x5 and 5x11h) and four 7x5h Perforated Plates; 11 Trunnions; six 6-hole 30mm diameter Bush Wheels (shown as 8-hole on the lid) and 12 Brackets. Of plastic are 12 Perf Plates in 3 sizes from 2x5 to 3x7-holes; two types of 20mm wide formed Strips (they are used as the mudguards in the Car above); 4 rigid 42mm Tyres (which bolt to the Bush Wheels to form wheels); 18mm Loose Pulleys; and 4 so called 'Bushings', which can be seen used as headlamps on the Car. Over 80 N&B were found in each Set, some 20 more than shown in the Parts List, and all were needed for some of the models in the Manual. The tools, all more or less useless, comprised a Spanner, a Spandriver, a Nut/Bolt Holder, and a pair of plastic Tweezers ('you can pick up a screw from the box by the forceps & insert it into a hole').

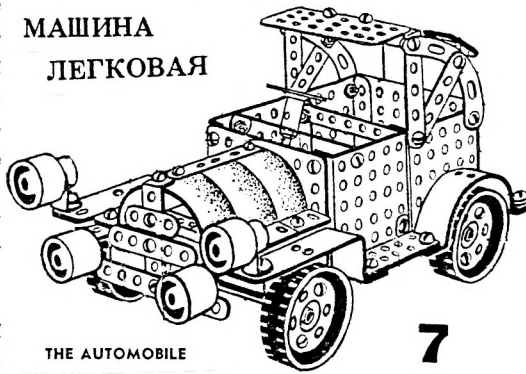
PARTS DATA (in mm) Strip (11-hole): • hole pitch/dia, 10.0/4.3; • width, 9.9; • thickness, .49.
Boss: • o/d, 7.95; • i/d, 4.3 mean; • nickel plated steel; • d/t. Thread: M4. Axle Dia: 3.98. DP (Mod): no gears.
Nut: hex 6.9 A/F, nickel plated steel. Also 7.1 pressed nuts.
Bolt: cheesehead 7.0 and 6.7 dia, nickel plated steel.

Other points about the parts:

- Apart from the Tyres all the plastic parts are made of flexible material about 2mm thick. The Plates are blue and the other parts red.
- All the metal parts are made from the same, about ½mm, thickness steel. Some of the parts that can't be seen in the models are shown below. The holes in some sizes of Strips are 4.2mm. The corners of all the parts, metal and plastic, are fully radiused. One disappointment was #39 which from its description might be thought to be Cord on a winding drum, but it turned out to be Cord wound onto a shaped piece of cardboard.



МАШИНА
ЛЕГКОВАЯ



THE AUTOMOBILE

7

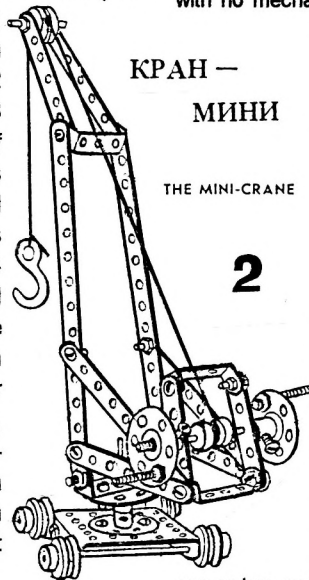
- Nearly all the parts are well made and finished but there are a few problems. The bore of the Bush Wheels is so much larger than the Axles that the made-up wheels all turn with a noticeable wobble. The bosses have to be over 12mm long to go through the Tyres, but this makes them clumsy when used elsewhere. Also the wall thickness of the bosses is only about 70 thou and there's a real risk of stripping the thread when tightening set screws, particularly as some of the tapped holes were quite deeply chamfered.

- The N&B in one Set were acceptable in that the Nuts (chamfered on both faces), though tight, could mostly be screwed down using the Spanner/Screwdriver in the Set; in the other box many of the Nuts (the pressed sort) would only run down the Bolts (they had the slightly smaller heads), using extreme force. Another problem with the Bolts was their 8mm u/h length: it was needed for the plastic components, but was much too long when joining the metal parts.

The Manual shows a single line drawing for 8 straightforward models with no mechanical sophistication; there are several road vehicles, a couple of cranes, a helicopter and a loco. Most are unusual in that they use the formed plastic parts to suggest rather than to completely define contours. I found the results pleasing in the main but they might not be to everyone's taste. All the models could easily be elaborated using the unused parts in the Set, seats and a floor in the Car, for instance.

КРАН —
МИНИ

THE MINI-CRANE



2

The box lid carries a little information about the origins of the Set: as well as 'Made in the USSR' and 'Leningrad', there's 'The Experimental Factory of Metall Haberdashery & Souvenirs'. The Manual has '693' and '29.09.91' on its back page, and in view of the USSR and Leningrad above perhaps the 91 might be the more likely as a date. Neither the Set or Manual show a set number and there is no indication of any companion outfits.

Well Leningrad Metall Haberdashery, I'm well pleased with your \$10 'Meccano' souvenir, and I hope you're still in business and planning further delights. You've one or two quality control problems there and while you're copying the Meccano name, try copying their Spanner, it would be a lot better than yours. Still that's true of practically every marque, so just send me the 4 Plates and 2 tyres that someone didn't pack into one of my sets, and I'll send you, if pressed, the several extra Brackets and other small parts that I found in the other one.

SUMMARY OF MANUAL

#Name: KONSTRUKTOR UNIVERSAL'NYI (transliteration) | THE TOY MECCANO UNIVERSAL. #Details of maker: none. #Dates &/or Ref No: LFOP2.3ak.693.Tir. 60000 zcz.29.09.91. (on back cover). #Page size: 206x 286mm deep. #No of pages: 16 inc covers. #Language: Russian, English. #Printing: line drawings, some red on cover. #Page Nos of Parts List/Set Contents & highest PN: 3-4, 41. #Sets covered: 1 (no Set No.) #No of models: 8. #Name, Model No, Page No of first & last model: THE TANK-TRUCK, 1, 8. THE LOCOMOTIVE, 8, 15. (no Model Nos.) #Other notes: none.



NEW SYSTEM - MAXHINA Ashok Banerjee sent several of these Indian sets with the PLANO material described in 10/258. MAXHINA was made by Machino Engineering Industries in Delhi, probably during the 1960s. Like PLANO, which was also made in Delhi, the parts are red and green, and are all similar to MECCANO. The main difference is that the holes are smaller to take the 1/8" BSW N&B that are used. Unlike PLANO the hole pitch is the standard 1/2", and the parts are generally of somewhat better quality than those of PLANO, with all the holes in line and accurately spaced, although some flash is present around a few of the Strips and Brackets. The worst feature is the bosses which are made from two concentric rolled steel tubes: the inner passes through the disc and is peened over, and the outer grips the inner and bears against the boss side of the disc. Some of them are well made but most seem to have been squashed during manufacture and their bores are distinctly oval.

DATA (in mm) **Strip** (11-hole): • Hole pitch/dia, 12.7/3.4; • width, 11.8; • thickness, .87; • ends near fully radiused. **Boss**: • o/d, 8.3 (typical); • i/d, 3.4 (nominal); • red painted steel; • d/t. **Thread**: 1/8 BSW. **Axle Dia**: 3.22. **DP(Mod)**: ? **Nut**: hex & sq, both 6.1 A/F, plain steel. **Bolt**: roundhead 5.1 & 5.3 dia, plain steel. Cheesehead also shown in manual.

Other details of the parts follow. Only those in sets up to #9 have been seen: and all are to MECCANO pattern unless otherwise noted.

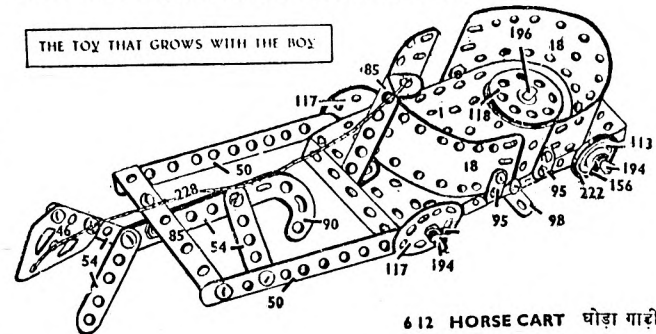
- 25-h Strips are thicker (1.13mm) and wider (13.6mm); Strips less than 11-h are 11.5mm wide. Curved strips are a good 1/2" wide, and Brackets are about 12mm.
- Flexible Plates are about 12 thou thick: all have slotted end holes and all but the 5x5h and 5x9h have centre holes.
- The wire Screwdriver is 9cm long. Cord is either thin green or very thin white.
- All parts are steel except a nicely turned brass 13mm Loose Pulley, and the ball of the red small Weighted Hook.
- Strips, 'strip' Brackets, and tools are painted a medium green; Plates of all sorts, all round parts, and Trunnions are medium red. DAS and Curved Strips are green in some sets and red in others. Angle and Flat Brackets are nickel plated. The paint has a dull appearance and the finish is rather rough in places, but apart from the nickelled Brackets, not much rust is evident.
- The Road Wheels are the same general shape as the original MECCANO 187, but in one piece (with a solid brass boss), and with the 'tyre' covered with a plastic 'tyre'. Its o/d is about 2.7" and it's a little over half the width of a 'full' tyre, it has the marked MECCANO tread of the period. In one Set the plastic is red and in the other, dark grey. 1" Tyres and Rings are of black rubber.

THE SETS The smallest consists of 15 parts, plus a box for the small items, strung to a yellow card 8 1/2 x 5 3/4". There are 4 each of 3 and 5-hole Strips, 2 Wheel Discs, 2 3/4" Washers, some Cord, and a Screwdriver and Spanner. Unfortunately there's no Manual and the box it's in doesn't bear a No. In any case it measures 8x12" and so probably originally housed a larger set. It has a red lid with a full colour label showing a boy with a model Shovel Loader, against a background of ships and a propellor driven airliner. The makers diamond shaped 'MEI' logo appears twice and along the bottom is 'The Toy that grows with the Boy'. That has a familiar ring to it, and for the record the model is the 1954-61 MECCANO Model No. 3.30.

The next Set doesn't have a box but it has a Manual marked '6'. The Contents are listed in it and are rather similar to a

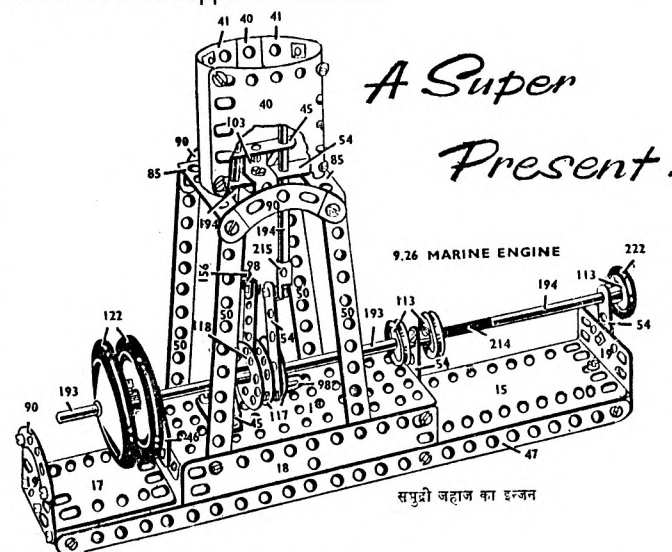
1954-61 MECCANO #1. The main differences are that the Indian Set contains two 3-h Strips; 2 Wheel Discs replace two 1" Pulleys; and there are 2 Rubber Rings and no Tyres. Also there's a crude bent wire Hook instead of the #57c. In the actual Set a few Nuts were missing and Tyres were included instead of the Rubber Rings shown in the Manual. The parts are strung onto a 15x9 3/4" card, again yellow.

The Manual shows line drawings of 31 models, of which I recognised 7 as MECCANO #1 models: 4 of them were current in 1954-61; the other 3 date from before 1947 but the illustrations have been updated to show elongated end holes in Flexible Plates, and so forth. The hex Nuts and round-headed Bolts found in this Set, are shown in the Manual. One of the 'original' models is shown below.



The final Set is a No.9, complete with Manual, in an 11 1/4 x 16 x 1 1/2" box with a lid and label identical to that described already. The parts are strung onto 2 yellow cards and the contents, though not listed in the Manual, correspond, more or less exactly, to a 1954-61 MECCANO No.3, with the following additions: two 3h Strips, two 1x3x1 DAS, a Crankshaft, painted green, and one of those bent wire Hooks. Also a Box Spanner replaces one of the ordinary ones. The Crankshaft isn't in the Parts list in the Manual but there's a definite place for it on one of the backing cards.

The Manual again contains 31 models with line drawings of each as before. This time all are MECCANO #3 models, and although again some details have been updated, the Road Wheels are shown as the original pattern without the plastic 'tyres', and the N&B haven't been changed. Square Nuts and RH Bolts were supplied in this Set.



Some No.10 models, ex MECCANO No.4, are shown on the back cover of the #9 Manual, but it isn't known how far the range of sets extended. An indication that there were larger sets is that girders and gears are mentioned in the Manuals' Introductions. The Parts List at the end of each manual only contains the parts needed for that particular Set, so the total

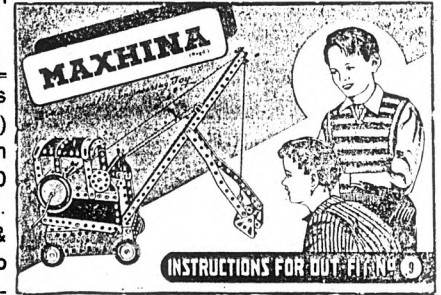
range of parts isn't known either. The Part Nos. don't follow the MECCANO numbering and the 51 parts listed for the #9 Set go from 1 (5x11h Flanged Plate) to 256 (Nut).

MEI's parts may not all have been perfect but their range of slogans was tremendous. I've mentioned the one on the box lids and there are many more on the N&B boxes, and on practically every page of the manuals - 'Toys of Quality', 'Be an Engineer', 'The Toy of the Century', 'Real Engineering in Miniature', 'The World's Greatest Constructional Toy', 'Engineering for Boys of all Ages', 'Actual Mechanism is in your Hand', 'Toys that help Teach', 'Win your Battle of Life on Play Ground', 'It's Realistic, It Works, It's MAXHINA', etc. The introduction in the manuals and the titles of the models are shown in Hindi as well as English, but the slogans are only in English.

SUMMARY OF MANUAL #Name: MAXHINA #Details of maker: Machino Engineering Industries, Delhi, India. #Dates &/or Ref Nos: none. #Page size: 254x180mm deep. #No of pages: 16 inc covers; no

page nos. #Language: English, Hindi. #Printing: Black line drawings on poor paper. #Page No. of Parts List/Set Contents & highest PN: 15, 256. Sets covered: #6. #No of models: 31. #Name, Model No, Page No. of first & last model: SCALES, 6.1, 3. LAND YACHT, 6.31, 14. #Other notes: models between 6.1 and 6.31 are not in order. 5 No.7 Set models are shown on the back cover.

SUMMARY OF MANUAL (details which are as above are not repeated) #Page size: 245x186mm deep. #No of pages: 20 inc covers; no page nos. #Page Nos of Parts List & highest PN: 19, 256. #No Set Contents. #Sets covered: #9. #No of models: 31. #Name, Model No, Page No of first & last model: ICE CREAM VENDOR AND VAN, 9.1, 3. TRACTOR AND HAY WAGON, 9.31, 18. #Other notes: three No.10 models are shown on the back cover.

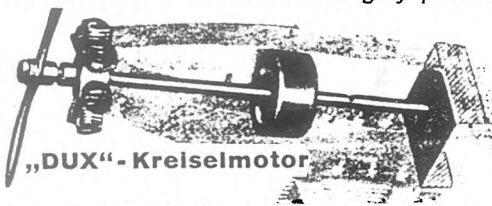


DUTCH DUX AERO Since the article in 10/248, Peter Page has acquired a #104 Set from a Dutch friend, and kindly sent a copy of the manual and the following notes on the parts: "The hole size is .130" (3.3mm); hole pitch is 12.5mm based on #67 [the centre, side plate of the fuselage]; and the thread is 1/8" WHIT. All the parts are steel except for the rubber tyres, the brass bosses on the prop and wheels (single tapped), and the brass shouldered screws, #74, 88 (plain turned head with no screwdriver slot). The normal screws (slotted, square cornered cheese headed) and the 6mm A/F hexagon nuts are bright plated. The corrugated surfaces are all flat and the control surfaces are painted on. The wings have painted ailerons on one side only, thus handing them. Most of the parts are painted aluminium grey with the printed windows on #68 and 69, but #63 [the rear, upper fuselage] is red and yellow. The trade mark on #62 [front upper fuselage] is a separate stamping, tab fixed. Note in the manual the flywheel 'motor' on a longer shaft."

The manual is in Dutch but is otherwise very similar to the German version. Differences of note are: • On p2 there is no mention of a Swedish version. • The date following 'Copyright' is missing; the print reference is 1000.9.32. • Sets 106c, 109 and 110 are not mentioned, nor is the Clockwork Motor. • The contents of the sets are not given, only the List of Parts, which is identical to that in the German edition.

There is the same remark about cleaning aluminium parts (Aluminiumteile in the German) in both manuals, so this was no doubt a reference to the aluminium grey painted parts.

There is this illustration of the flywheel motor in Peter's manual, see above. I

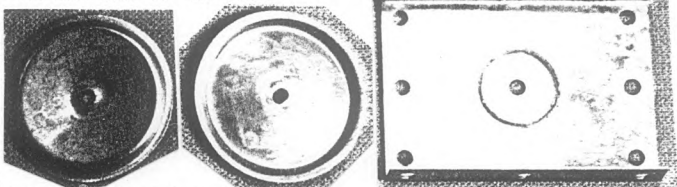
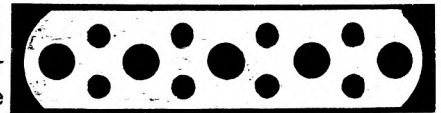


suppose the prop went on rotating for a while after it had been spun up by hand.

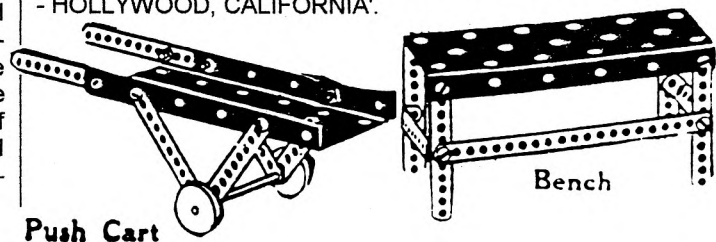
Going back to the German phrases 'Steuer beweglich' and 'Modelle mit kompletter Steuereinrichtung' in the OSN 10 article, my thanks to Geoff Davison and Al Sternagle for offering translations. Taking some liberties with these to allow for the aeronautical context, the first may indicate that all the control surfaces, rudder, elevators and ailerons, are movable, which is true for Set 108, and for #106, which has the same flying surfaces. The second may mean much the same, or may indicate that some further stage/degree of control is provided (in Set 110). I can't think what this could be unless the control surfaces were linked to the cockpit controls, which would hardly be practical in a small model.

HOLLYWOOD U-BUILD-IT Richard Symonds recently sent me a Strip (photocopied below) from this rare American system, and a photo of the other parts he has. These, together with some information from an article in the Southern California Meccano and Erector Club Newsletter for July 1986, allow a few more details to be added to the MCS entry.

The Strips are rather unusual with the 4.8mm (3/16") main holes at 7/16" pitch (11.1mm), and the pairs of 1/8" holes between. They are 13.0mm wide, and are known in 6 lengths with 2, 5, 7, 12, 14 and 18 (main) holes. The Flanged Plate shown in MCS (below) would have 5x7 holes on top if all the holes were present; there's also a similar but longer Plate, with 5 holes in the flange at the same 1 5/16" spacing. The Wheels (below) are 2" dia with no boss and a shallow flange. Angle Brackets are not made from short lengths of the Strip material but are plain with a round hole in each arm. Apart from steel N&B all the parts are made of aluminium; the mention of wooden wheels in MCS may have been a misunderstanding. The thread is 6-32, too large to go through the small holes in the Strips but there would be considerable play in the main holes. The Nuts judging from the size of the Spanner, were the commercial size of 5/16" A/F.



The two models below are from the Leaflet shown in MCS; they are straight copies from the ERECTOR manuals of the late 1920s for their small beginners set, and do not show the actual HOLLYWOOD parts. No indication of date is given anywhere. Certain words under the models have been blacked out, but they can be deciphered as 'GOLDEN STATE / CONSTRUCTO / MANUFACTURED BY F.K.HAAS - HOLLYWOOD, CALIFORNIA'.



DELTA-X, DELTAX, D-180, ET AL In 3/42 Don Redmond noted that the parts shown in MCS for D-180 look identical to those of DELTA-X, [and their PNs correspond], but that similar parts he owned had a hole pitch of 14.0mm against the 14.2 in MCS for DELTA-X and the 12.7 for D-180. Soon after Keith Sketchley kindly sent a D-40 Set from Canada, plus a selection of kindred parts. All with very minor exceptions looked like those in MCS and all had a pitch of 14.0mm. Then recently Don sent notes on some parts he had found which were definitely DELTA-X and had 14.0mm spacing.



So it looked as if both systems were from the same maker and the D-40 box (above) added to this notion. It's all in Japanese except for 'PAT. P.', and 'ISO' on the side, but a friend of my daughter who's a professional translator, very kindly came up with the English equivalent. The 3 lines of text at the top left read 'Epoch Company's | DELTAX | Steel Construction Kit'. Elsewhere is a Tokyo address for Epoch Co. Ltd., and a list of the other sets in the series: D-80, D-100, D-150, D-200, D-300, D-400, D-500. There's also a panel on the back of the box which reads 'ST| Passed Toy Safety Standard | D0032920 | Japan Toy Association | 3-14-11, Minami, Daito-ku, Tokyo'. And the ISO noted above refers to the use of standard N&B.

Compare the details above with the name and company given on p6 of the MCS/FB entry - 'DELTA-X | steel construction kit | EPOCH PLAYTHINGS, SCARSDALE, N.Y.' - and you can see why I'm satisfied that D-180 and DELTA-X are both from the same family. It would have been tidier if D-180 had been included in the list of sets on the box but no doubt it was part of the range at one time.

THE PARTS The colour scheme is BZP Strips, DAS, A/Gs, and Brackets; plastic Plates in yellow or blue, or for some, both; Flanged Plates blue (3x5h) and red (5x10h); yellow Trunnions; black plastic Wheels and Pulleys; and iridescent metal Pulleys, Bush Wheel and N&B. Quite a few parts haven't been seen, notably the 56mm Pulley; the Braced Girder, S-012; and the Plates S-038 and S-061. Incidentally PNs beginning with 'P' are used for plastic parts, and 'S' indicates metal, usually steel. Electrical items start with 'E' and 'M' probably stands for Miscellaneous. The parts are accurately made and well finished: notes on them, particularly where they differ from the illustrations in MCS, and exceptions to the colour scheme, follow:

- The motor and gears of the Motor Unit E-004 are inside a red plastic casing which can't be taken apart. There's room in the top of it for 2 AA batteries in series, with an adjacent On/Off switch. The output shaft extends through both sides of the casing; it's made of black plastic and is stepped, with the smaller dia taking the standard boss.
- The Strips are 14.0mm wide and are as shown in MCS except that the 5-hole size also has the slightly elongated end holes shown for the others. Holes are 4.4mm dia but in

other parts, the A/Gs for instance, they are no bigger than 4.3mm.

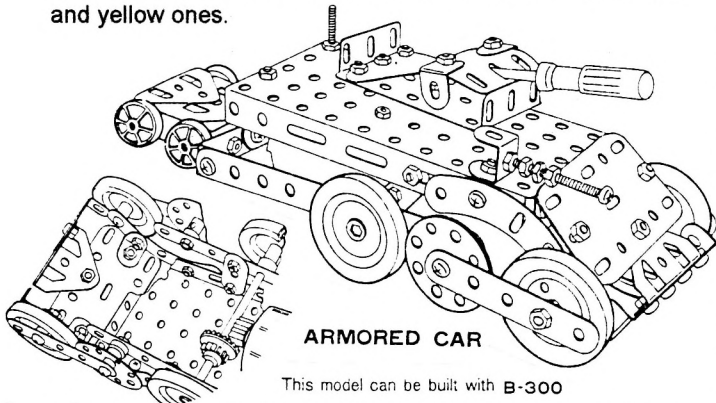
- The lugs of the DAS are at 90° even if they look at 45° in MCS. The holes in them are slightly elongated. Likewise the S-060, Double Bracket - the S-019 style with slotted side holes, has not been seen.
- The 14h A/G has elongated end holes as shown, but every other hole between is elongated crosswise (ie MECCANO-wise). A round hole in one flange corresponds to an elongated hole in the other, and this can complicate matters when using 2 A/Gs as a handed pair. In the 5h Girder all holes are alternately round or elongated crosswise, with again a round hole opposite an elongated one.
- The Flexible Plates are made of a polythene type plastic about 50 thou thick.
- Axles are 4.04mm dia and as well as the lengths shown in MCS, one 40mm long was found among the DELTAX parts.
- The thread used is M4. The Nuts are the standard 6.9mm A/F; the Bolts have pan heads of the same dia and are slotted straight/crosshead. [Is there a name for this combination?]
- The Plastic Small Wheel, P-006, is 20mm dia and is a tight push fit on the Axles. The 28mm Pulley and the 38mm Bush Wheel have double tapped bosses that appear to be made of a zinc alloy (iridescent finished). Their o/d is 8.0mm and the bore, 4.34mm. They are easy to spot because they are crimped in with an 8-prong tool which leaves a 'splined' look inside the end of the boss.
- The nylon Gears are a push fit on the Axles and the tooth pitch corresponds to Mod 1.
- The 6-spoke Flywheel is a zinc casting: its diameter is 45mm and it has a rounded outer face.
- There are two types of Hook, the cast one shown in MCS under DELTA-X, and a sheet metal version with a similar outline, but with the hole in it enlarged enough to take an Axle.

DURATAXE This system appeared in MCS part 5, with just the manual cover being shown, and the comment that it is probably the same as DELTAX. The parts that can be seen on the cover look identical and more conclusively the Japanese characters for the name and manufacturer of the system are identical to those on the D-40 box. It isn't stated in MCS where the name DURATAXE came from but it may be that it's a corruption of DELTAX, or perhaps the Japanese characters can be rendered into English in more than one way.

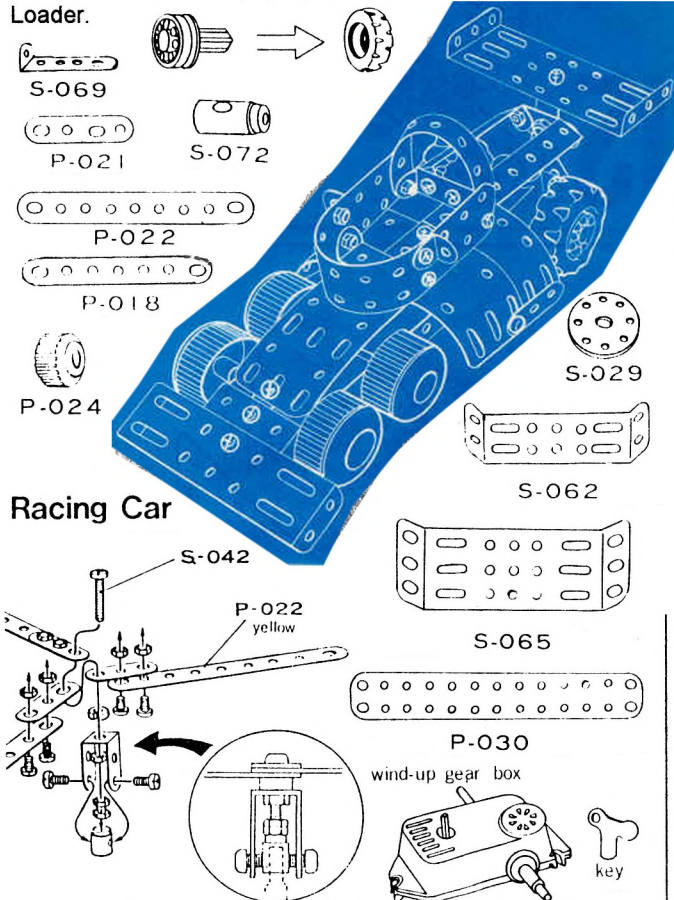
BUILD-X From Richard Symonds a copy of the box lid and manual for this 'new' system. On the lid is: BUILD-X | steel construction kit | Sears | B-200 | Made in Japan | Imported by Leisure Dynamics of Canada Ltd., Don Mills, Ontario M3A 1C6. In the Manual '1315 Lawrence Ave. E.' is added to that address. Apart from names and addresses, the MCS pages for DELTA-X are virtually identical to their BUILD-X equivalents. The Illustrated Parts page has been rearranged but the PNs are the same and so are the parts except for one addition, the D-180 5x2h Plate, S-038, and one change - the Screw Driver is shown with a cruciform tip instead of a flat blade. The only other change is that the Model No. of the Sailing Yacht model has a 'B' prefix instead of 'D', and errors in its Parts List have been corrected. This last probably mean that BUILD-X came after DELTA-X.

The sets in the range show the addition of a small set B-060 to the DELTA-X line up, and one of the models shown for it is the Mini Car shown on the D-40 box. There

are 18 models in the 8 page manual and by far the best for me is the Yacht in MCS. There's another good vessel, a Steamer, and of the rest the Armored Car below is a fair example. From the models it seems that B-200 included the E-004 geared motor unit, and the larger sets had the E-002 Motor and separate Gears, P-003/5. Richard mentioned that the Set came in a yellow plastic box with a colourful label, and that there were red Plastic Plates as well as blue and yellow ones.



STEEL CONSTRUCTION KIT SERIES There are 7 Sets in the Series and each is intended to make a particular model. One, a Steam-Engine Train (actually a loco), is in Part 5, and details of two others, a Helicopter and a Racing Car (below), are available. Each has a Model Leaflet with step by step instructions illustrated by blue on white line drawings, and the Set Contents are given with similar illustrations of the parts. All three models are powered by a geared clockwork motor in a plastic casing: the one in the Car is black with a red plastic key. The other outfits are for a Concrete Mixer, a Dump [sic], an Excavator, and a Wheel Loader.



Most of the parts appear at first glance to be standard DELTAX and the PNs are the same, but there are some differences:

- The holes are smaller at 4.2mm - except for those in the 10-hole Strip which are nearly 4.7mm.

- The Axles (at least in the Racing Car Set) are hexagonal in cross section, 4.00mm A/F.
- The Plastic Plates are much thinner, .4mm instead of 1.2.
- The ends of all slotted holes except those in Plastic Plates and the long ones of the Flanged Plates S-062 and 065 (see below), are large radiused, like BRAL.
- The parts are not quite so well finished with slight burr detectable around some of the holes.

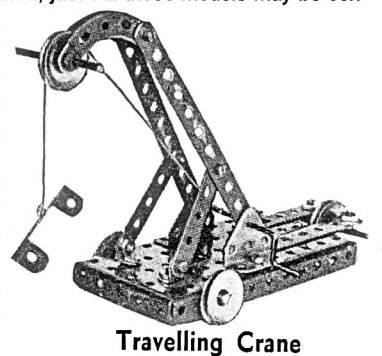
There are also a handful of new parts, the main ones are shown around the Racing Car. The plastic Strips, including the double width P-030, are very flexible. All the Wheels for the Car push onto the Axles; the rear ones (no PN given) have 'W.S.C' moulded into their black plastic tyres, and have red centres: the front centres are chrome. The Coupling S-072, as shown in the inset, is used to connect the motor to the rotor in the Helicopter.

Metal parts are BZP; the colour of plastic parts varies from kit to kit, with combinations of red, light blue, yellow and white. All known details are given in an Extra MCS Sheet.

Don kindly sent me one of the Racing Car Kits. The box measures 7x5½x1½", and shows the model in full colour on the top, and again on the underside, together with black line drawings of all the parts. On each side is 'Racing Car | Wind-Up Motor Makes Train Go'. When made up the model is quite attractive, although it would have looked more realistic if a seat and steering wheel had been represented. I'm told that the prototype was a 1975 Tyrrell P34. On a smooth surface it runs for more than 20' on one winding, with a good turn of speed. The hexagonal Axles for the front wheels 'click' round well enough, though the wheels are so tight on them that it was very difficult to push them fully home.

WHERE AND WHEN The date in MCS for D-180 and DELTA-X is the 1970s; the country for D-180 is given as Taiwan but quite apart from the wording on the D-40 box, the thick DELTAX Plastic Plates have 'Made in Japan' moulded into them. It's just possible of course that at some stage the parts were made in Taiwan but there's nothing to corroborate this in MCS. As already mentioned BUILD-X has 'Made in Japan' on the box lid, and may have appeared somewhat after DELTAX. The STEEL KITS were on the Canadian market for a year around 1989, and on the box (and moulded into the motor) is 'Made in Korea'. As a matter of interest the self-adhesive transfers in the Racing Car Kit are mostly of products like 'Elf' and 'GoodYear', but there's also 'Australia' and an Australian flag. On the car on the box though is a Union Jack. Whether production in Korea was by the original Epoch Company is not known, but as some parts have changed slightly, perhaps not.

QUERIES 18. Having some parts without a manual is not uncommon but now I've got a Model Leaflet without any parts, and it doesn't have the name of the system on it, just 'All these models may be constructed with this set'. With one or two exceptions the parts look like MECCANO and the following can be seen: 2, 5, 12, 22a, 48a, 52, 90a, 126. Also Axles, about 2" and 3", a Crank Handle, hex Nuts and CH Bolts, and small rubber Collars. There are no holes in the face of the Pulleys, and the Trunnions are the 7 hole sort with no cut-outs. Any ideas?



MORECRAFT, MECCANO and MODERN MORECRAFT started out under the aegis of Gilbert as MECCANO-MORECRAFT (M-M here) and was later sold to continue under the name MODERN-MORECRAFT (M-R). It was based on Angle Members (girders) with each end divided by a cut along its apex, and with a tab on the end of each resulting leaf, which springs into a corresponding slot in one of the variously angled Connectors provided. Those and a Base Plate are the main parts in the smaller sets, plus some Rods, Pulleys and so on, but in the larger outfits there are also ERECTOR style Strips (ST) with the holes close together, a few Gears and Brackets, again with an ERECTOR look to them, and some Panels (card?) with corners cut to shape so that they would wedge inside the assembled Angles. N&B and Snap Rivets were used to secure the Strips and other parts as necessary.

Richard Symonds recently sent me a copy of a M-R manual, and soon afterwards Geoff Wright showed me an apparently unused M-R Set, complete with manual. The illustrated Parts Lists in the two were however different and one had 'The Skipper Toy Company Inc, Branford, Conn.' on it, and Copyright 1937, while the other was from the 'Morecraft Corporation, New London, Conn.', Copyright 1946. Both those addresses are in MCS for M-R but only one of the Parts Lists is shown, the later Morecraft Corp. one. The earlier one is in fact identical, apart from the name and address of the manufacturer, to the M-M one in MCS.

It is said that Gilbert sold the system to Skipper in 1935, who, to judge from their Parts List, continued the same range of parts until at least 1937. Possibly this range continued until the Morecraft Corp. era, perhaps until 1946 when the revised range of parts may have been introduced.

Apart from the novel parts such as the Angles, needed for the much advertised 'boltless joints', and the Panels mentioned above, most of the other M-M/Skipper parts appear to be standard ERECTOR. But a few, for example the 3" Pulley, look like the MECCANO pattern, though with the smaller diameter ERECTOR boss. One unusual part is a 1½" Pulley without boss (#W-2) which has 'tunnels' in the bore, two diametrically opposite, to take a Key which looks very like the early MECCANO one. I'd fondly imagined that Gilbert, who was renowned for not wasting anything, had found a cache of these when he acquired Meccano's New Jersey factory and decided that if M-M was going to have rather rickety structures it might as well incorporate these Keys and have rickety Pulleys as well. But my dream is shattered, first because the Keys, though like the MECCANO ones, are not identical to them, at least the ones in the 1946 M-R Set weren't; secondly Richard also sent me some parts, and structures, if properly braced, are surprisingly rigid. (Though that's a big 'if' as far as some of the manual models are concerned)

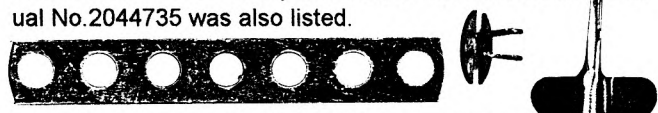
For M-M parts the hole spacing is given in MCS as 12.7mm and this is true for the Angles, and the majority of the main holes in the Flanged Plate are at 1" centres, although the holes in the outer rows are 9/16" from their neighbours. And other holes are differently spaced, in the Connectors for instance several are 1/3" or 7/8" apart, and those in the Pulley W-2 are at 7/16" radii. I haven't seen a Strip ST from this period, known to be genuine, but they are probably standard ERECTOR with ¼" spacing, and scaling the illustration in the manual gives that figure, based on the known width of the ERECTOR part.

Turning now to M-R, the main structural parts are the same

except that the Strips are narrower, 8.8mm instead of 10.4, and more important the spacing of the holes is exactly 1/3". This pitch was measured on the parts in the '46 Set and scaling the illustration in MCS, using the measured width of the Strip, gives virtually the same result. The range of pulleys has changed too with one of 1-5/8" dia (W-16) replacing the two M-M, slightly smaller ones. In the '46 Set the W-16 were aluminium with 5/16" dia brass bosses, s/t 6-32, and of the 8 holes in the face, 4 were at ½" radii with the alternate ones at 1/3". In MCS the larger Pulley is shown with holes that also scale at 1/3" centres and the centre hole takes a separate screwed boss. There are 3 other smaller Discs shown with the larger centre hole; all with at least some holes scaling at 1/3". The 3 gears shown in MCS, that's one less than in M-M, have normal bosses. [Kendrick Bisset has since confirmed that the M-M Strips are identical to ERECTOR. He also has evidence that Skipper Toy M-R Strips are the 1/3" pitch type. The holes in all are 4.3mm diameter.]

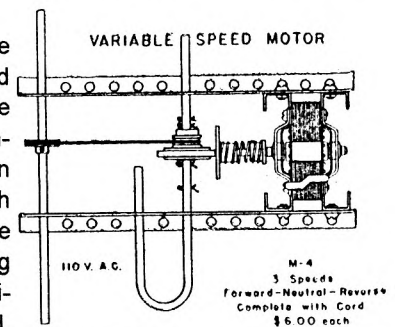
Other points about the '46 Set:

- The box measured 19½x10¼x1": there was no indication on it or elsewhere what the set was called, but from the manual it could be deduced that it was a 'Craftsman' size. Patent No.2042353 was printed on the lid and on the manual No.2044735 was also listed.



- The two 7-hole Strips (above) had very large radius ends and their holes were 4.4mm diameter. In one of them the hole pitch was slightly irregular.
- The Keys (above) were nicked with 8mm wings; they were 15mm in length overall. With the M-R range of parts Keys as opposed to Spring Clips were not actually needed. The brass Snap Rivets were not the normal ERECTOR pattern and had only two (straight) prongs, see above.
- The diameter of the Rods varied between 3.96 and 4.03mm. The largest ones appeared not to go through the bosses of the W-16 Pulleys (4.01mm) but the Rods were somewhat corroded and this may have increased their diameter a little. They were square ended.
- The holes in the parts other than the Strips were generally 4.3mm but some had been distorted a little during manufacture and only a 4.2mm drill would go through them.
- The contents of the Set were noted if anyone needs them; they will be included in MCS later if enough extra information becomes available to justify an Extra Sheet.
- The colour scheme was dark blue for the Base Plate; nickel plated Angles, Strips and Connectors C-0; with the other Connectors painted a medium, rather flat, red. Some of the parts from Richard were a much darker red and some a light shade.

There was no motor in the Set but in the Parts List (and in MCS) the top view of the M-4 is shown and it is unusual in having a friction drive to the output shaft, with provision for moving the driven disc across the spring loaded driver into 3 positions, thus giving forward, neutral and reverse. Although the motor must have run at quite a high speed, no significant reduction was provided in the friction or pulley drive stages. Does anyone have any further details of this machine?

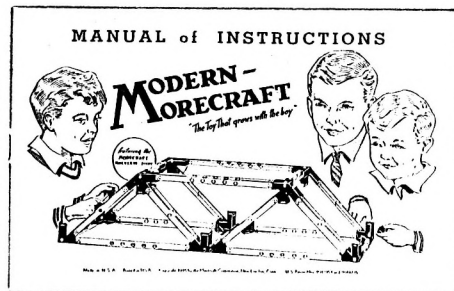
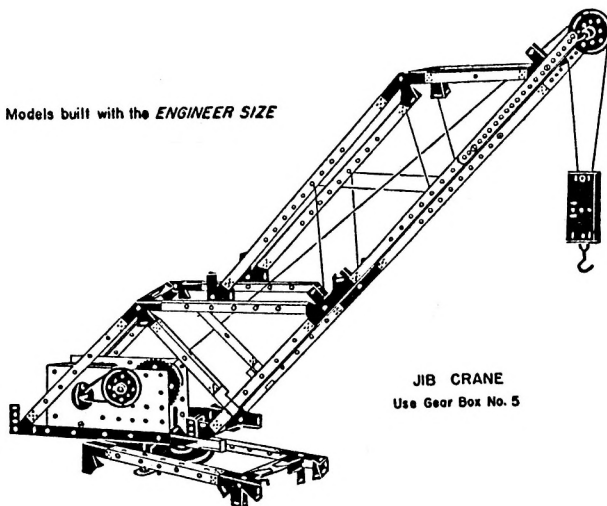


Richard's Skipper M-R manual covers only the two smallest sets and has photos of a fair selection of models, though the unused arms of some of the Connectors give some of them a rather unfinished look. The 1946 version is for all the 5 sets then available, except the smallest, and the models for the Craftsman set in fact include nearly all those for both the Sets in the Skipper manual, plus 20 or so new ones. One of the larger models, driven by the 110v motor that was included in the two top sets, is shown opposite.

Finally an interesting note about the Patents from MJ.31. No.2042353 was applied for by Terry Bryan Morehouse of West Hempstead, N.Y., on 5th November 1934 and was granted on 26th May 1936. No.2044735 was in the name of Henry Pelton, assignor to the Stanley Works of New Britain, Conn., the date of application was 25th January 1935, and the date of grant, 16th June 1936. Stanley made the STANLO system which used DINKY BUILER style parts, but how they fitted into the Morecraft story isn't stated.

SUMMARY OF MANUAL. #Name: MODERN-MORECRAFT #Details of maker: Morecraft Corporation, New London, Conn. #Dates &/or Ref Nos: Copyright 1946 on FC. #Page size: 237x148mm deep. #No of pages: 36 inc covers: no page nos. #Language: English #Printing: dark blue on beige paper; all line drawings. #Page No of Parts List & highest PN: 36,WR-2. #No Set Contents. #Sets covered: Craftsman, Designer, Designer Special, Engineer. #No of models for each set: 78,22,7,7. #Name, Page No of first & last model of each set: PARALLEL BARS,3; GARAGE,18. FOUNDRY HOIST,19; SKYSCRAPER,24. JIB CRANE,25; WINDMILL,26. TELPHER SPAN,27; PILE DRIVER,29. #Other notes: pp30-33 show standard gear boxes. A FERRIS WHEEL which needs extra parts is on p34.

Models built with the ENGINEER SIZE



SOME MORE OS NAMES Jeannot Buteux send the list below, of systems for which he or the group CONSTRUCTORAMA have paperwork and/or a set, and which are not in MCS. Jeannot has of course been a major contributor to MCS in the past and I hope that he will be able to send details of these new systems so that a summary can be included in OSN, and where appropriate, MCS Extra Sheets issued.

ALEMANI; ARTS & MÉTIERS 3 [#]; ARQUITECTURA; BERGLAND; BURGER; CAMIONEL; CONSTRUC; CONSTRUCTOR [FR, 1916]; CONSTRUCTOR [GE]; CORUS; DEN DANSKE INGENIOR; DER KLEINE INGENIEUR; DITMAR; DORANDO; ÉCÉPÉ; EFEL [#]; EIFFEL [DE]; ELEKTROMECH; ELEKTRUS; ESCHOT; FANTASIE; F.D.K.K.; FIX [#]; FRI-BIE; FRYDAGH; GLOBUS [GE]; GLOBUS [GEE]; HOHA [#]; I.B.J.C.;

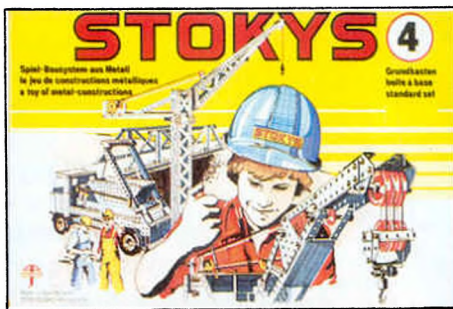
IDÉALE MÉCANIQUE; INVENTOR; JEEP AUTO; JIEL; JOLEI; JUGA; KINEMA; KOHLER; KONSTRUKTOR [GE]; KONSTRUKTOR [GEE]; KONSTRUKTOR [PO]; KONSTRUKTOR [RS, 4 different]; KONSTRUX; LE MÉTALLO; MAXI-FUN; MABA; MALY K.; MECANIC [GE]; MÉKA; MÉTAFLEX; METALBOUWS; METALL [BE/GE]; METEOR; MEWEKA; M.F.C.; M.K.A.; MLODY; MONTIX; MÖWE; M.W.K.; OREGION; PLASTICON; R.M.; RUR; SATURN; SIEMENS; SPRANGER; STABILA; TECHNIK; TEST; TUBA [GE]; TUPO; WIFRA, WESFALIA; ZICK-ZACK.

The letters in brackets after some of the names is the country, as 6/125 except FR is France (omitted in error before), GE is Germany, and GEE is the former East Germany (GDR). The # after some names probably means a different version to the one already known.

STOKYS 1992 Toby Haffter and Ernst Leuthold have send an Illustrated Parts List dated July 1992, and a brochure that lists the sets and motors for the same year. It doesn't actually have a date on it but it does have '50 Years' across the front, and the firm started in 1942.

The Parts List is identical to the 1989 one discussed in 7/166 except for the following handwritten additions: S16, 5/32" BSW Grub Screws; W72, Partitions for the W71 Storage Box; and a Transformer TR85. Prices are generally the same but the motors are sharply up as noted in 10/266.

The brochure shows the same standard sets 0-4, linking sets, and Gears Sets, as in 1981 (the last List I have), with the same number of parts in each. The boxes are different though with a boy in a hard hat working on a building site with suitable models, different for each set, all around him. And the manuals may have been updated too because several of the models shown for the different sets are not in mine from the 1970s. The 00 and K1



(Bridge) Sets are no longer listed. Additions are the 3 special sets to make the Crane, Big Wheel, and Truck, that were only available as plans in '81, and the 3 Auto Sets 1, 1a, 2 described in 8/174. The parts in the #1 and #2 are given as 225 and 365. There is no mention of the Potter's Wheel that was listed as a plan before. One new set is KP11 which is to make one small model; also listed are parts packs ET01-61 but with no details.

The motors continue as in 1981 but a 6v motor with gears, GM10 is also listed, and another item is extra gears for it - perhaps it is a 'Pile' motor of some sort. Then there is a Schalter (switch?) for it, and, apparently unrelated to anything that has gone before, a Getriebe 2stufig/Rouages 2-degré - 2-stage gearing?

Stokys Littau address is given but in larger letters is Pierre Gauthier AG, Hofackerstrasse 79, 4132 Muttenz, no doubt the parent company.

TEMSI Werner Sticht contributed the items below and opposite is some additional material from him, René Mikkers, Brian Rowe and José Moreno. My thanks to all.

My Visit to TEMSI in April 1994. In February 1994 I wrote to Temsi enquiring about outfits, parts and literature, and with the information I'd asked for was a letter which included the remark: 'We will show you some models when you visit us.' So after some telephoning I had the opportunity to be welcomed by Mr. Beldhuis, the owner of Temsi, at the factory in Hengelo. He showed me the packing area and the model room, and I liked the look of the many models there, mostly from the manuals.

Mr. Beldhuis told me that the parts are enamelled elsewhere, not in the factory. Asked about the history of TEMSI, he said that it began in 1946 and he had taken over in 1987. There was hardly anything left from the past, before 1987 the factory was in another part of Hengelo and many things were lost in the move.

All in all it was most interesting for me, and I'll remember Mr. Beldhuis as a most kind and helpful gentleman.

Some Remarks on TEMSI Parts. TEMSI parts use thicker material than most other systems: • 1.4mm for Strips, Double Brackets, DAS; • 1.2mm for Angle and Flat Girders, and Plates; • 1.0mm for Flat and Angle Brackets. Strips and Girders are painted green, the Plates red; both darker than the MÄRKLIN colours. Angle Brackets, Double Brackets, etc, as well as Curved strips, Trunnions, 3-hole DAS, Architraves, and N&B, are nickel plated.

Gears, Pinions, Couplings, Collars, are made of brass, and all bosses and Collars are double tapped. N&B and the Grub Screws are M4. Sprockets are of nickel plated steel and are interchangeable with MECCANO but not with MÄRKLIN. Pulleys are made of light red plastic with brass bosses. Flexible Plates have round holes and are also light red plastic, .4mm thick.

The Road Wheels Nr. 187 are metal with the tyre part painted black, they might be used as a substitute for the old MECCANO part.

There is a 60t Gear and so there ought to be a 15t Pinion to mesh with it, but it is not listed. No threaded rods are included in TEMSI but they can easily be bought commercially.

Spare parts are mostly offered in packages of 10 items, but in 5's or less for parts that are not used so much. Prices are less than half of the MECCANO equivalents and less than a third of the cost of MÄRKLIN parts in German toy shops. I have bought many parts that can no longer be obtained from MÄRKLIN, for example 19-hole A/G and 25-hole Flat Girders.

In OSN 9 I found a comment about the hole spacing of TEMSI parts. I measured some 25-hole parts and found that the pitch was very slightly more than 12.7mm but I couldn't be sure if this was a real difference or the effect of production tolerances. Certainly TEMSI and MECCANO/MÄRKLIN parts can be bolted together.

TEMSI Angle Girders have no rounded corners and they are a little longer than their MECCANO or MÄRKLIN counterparts. This can cause problems in rare cases. As an example bolt two Girders from the same system together through their end round holes: the possible range of included angles is 0-110° for MÄRKLIN (the shortest), 0-100° for MECCANO, and 85-93 for TEMSI.

TEMSI IN 1994 Recent brochures confirm that, as mentioned in 4/70, the sets have been renamed. The Dutch names are the same except that the CHAINBOX is called KETTINGDOOS, and the DRIVINGBOX is, as it always was, AANDRIJFDOOS. The lids of the boxes have been redesigned with one or more boys and a model on them, plus a man on some: all in colour on a white ground. The contents are still housed in the same light blue formed plastic interior.



The List of Set Contents for Outfits 0-5 is given in the current manual and compared with the old List in MCS (X1.6), there has been only one minor change, PN44 has been replaced by 11a. From the information given in a Brochure, Werner has worked out the likely contents of the add-on Outfits, as below, using MECCANO-style names and with the new PN's in brackets:

- 'X': 1 each of 165, 200, 290mm Axles (13,13a,14); 4 ea 38mm Pulleys with smooth (?) Tyres (21,142); 1x50t Contrate (28); 2 ea of Plastic Plates, 3x5, 3x7, 3x11, 5x5, 5x7, 5x11-hole (195b,195a,195,194b,194a,194).
- 'Y': 4 ea of 7, 11, 19h A/G (9b,9,8a); 1 ea 5x9, 7x11h Perf. Plates (71,70); 4 Curved Strips (90a); 4x7h & 2x11h Flat Girders (103e,103c); 2 Trunnions (126); 2 Flat Trunnions (126a); 1 pair Flanged Brackets (139,139a).
- 'K': 1 metre Sprocket Chain (94); 2 ea 14t, 18t, 28t, & 1ea 36t, 56t Sprocket Wheels (95,96,97,98,99).
- 'A': 2x125mm Axles (15); 1x38mm Pulley (21); 2x19t Pinions (26); 1x57t Gear Wheel (27); 1x50t Contrate (28); 1 Worm (32); 2 Collars (59); 1 Coupling (63); 2 Trunnions (126); 1 pair Flanged Brackets (139,139a).

He also mentioned a 'Wheelbarrow' Set. Its parts are skin packed on a green card and the contents as found are:

2x15h, 2x9h, 3x7h, 2x5h Strips (1b,2a,3,5); 1 off 1x1h, 1 off 1x1h Obtuse, 2 off 1x3h, Angle Brackets (12,12c,12d); 1x25mm Loose Pulley (22a); 1 Spanner & 1Screwdriver (34,36); 17 Nuts & 14 Bolts (37m,37b); 4 DAS 1x5x1h (48a); 1x20mm Bolt (111a); 1 Tyre for #22a (142a); 1 ea Plastic Plates 7x5, 5x5h (194a,194b).

The range of parts in the latest Leaflet shows only a couple of changes since the List given in 3/40. The 15t Pinion, #26c, isn't listed, and whether this was the source of Werner's note about its absence I'm not sure, but Brian has written on the Leaflet he sent, that it may contain small errors, so maybe that's one of them. Another change that may fall into the same category is the addition of an extra crosswise row of holes in the 3x11 and 5x11h Plastic Plates, located one hole away from the centre holes. There's also a different view of #30 and it looks as if it isn't a normal bevel, rather one of the type that can run with its mate over a range of angles. Its diameter scales at about 7/8", like a MECCANO #30, but it has 20 teeth against 26.

I haven't been able to check all the models in the current manual but it's probable that they are the same as those that have been used for many years. There's a new cover though with the same scene on it as the box above.

Summary of the Current Manual. #Name: TEMSI #Details of maker: Temsi Konstruktie Speelgoed BV, Beitelstraat 30, NL-7556 NC-Hengelo, Nederland. Phone/Fax: 0031 74 914470/433645. #Dates &/or Ref Nos: none. #Page size: 156x244mm wide. #No of pages: 58 + covers. #Language: Dutch, French, German, English. #Printing: B&W halftone photos, coloured cover. #Page Nos of Parts List: 30-36. #Page Nos of Set Contents: 1-2. #Highest PN in manual: 195b. #Sets covered: 0,1,2,3,4,5. #No of models for each set: 0:1-32; 1:33-47; 2:48-72; 3:73-92; 4:93-112; 5:113-130. #Name, Model No, Page No of first & last model: Sabel

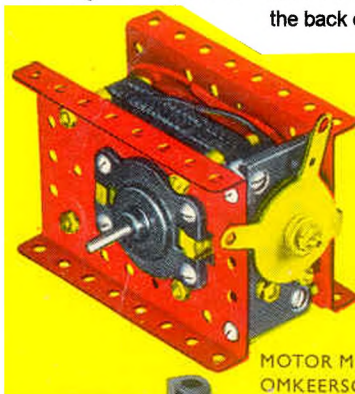
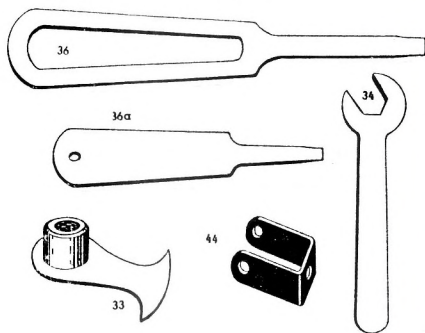
(Sword),1,3; Watervliegtuig (Hydravion),130,58. #Other notes: there are no manuals for Outfits X, Y, K,A.

TWO OLDER MANUALS. Let's start with the oldest. René Mikkers was good enough to lend me his TEMSI 0-2 Manual. The earliest one I had seen before probably predates the one in MCS and has boy and a blocksetting style crane on the cover in full colour; René's cover is similar but is in black and white. The illustrations of the models are not very clear photos; the ones in the later Manual are much better. The models are mostly the same but have been renumbered. There are several points of interest in the early Manual:

- In the introduction it says that TEMSI sets were first made in 1948 (cf 1946 from Mr. Beldhuis).
- Sets 0-4 and 0A-3A are listed, with no mention of the later Sets 00 and 5. Subsequently the set numbers were shown as Roman numerals, thus IV instead of 4, etc., but have recently reverted to Arabic again.
- The Parts List shows only the parts in MCS up to #63, so at that stage there were no Flexible Plates, Curved Strips, Trunnions or Sprockets. Illustrations of parts that look different to later ones, are shown below.

Returning to the manual with the coloured cover, it shows a couple of items of interest that are not in MCS:

- A red sideplate motor (below): it ran on 20v ac or 12v dc and took up to 3 amps of current. Two versions were available, with or without the reversing switch unit, which could also be bought separately. The nonreversing version was supplied too as a Kit (below, right), which included some standard parts such as DAS and Flanged Brackets, and a few Gears.
- Several sets are illustrated on the back cover and the parts are red and green as would be expected, except that the Flanged Plates and 5-hole wide Flexible Plates are a medium blue - the 3-hole wide Flexible Plates are red. The model on the front cover includes some Flanged Plates but they are shown in green.



CONSTRUCTION UPDATE Some news of the revised range of CONSTRUCTION Sets from Don Bock. He sent a copy of a fax that was sent to him by Eitech, the manufacturer, last September; it contains a list of the current sets with the number of parts in the larger ones, and a picture of each but they haven't survived transmission too well. As noted in 7/171 the Set Nos. on the boxes are no longer prefixed by 'C', although in the list the C's are still there. In summary the

Set No.	Name	Parts	Old No. Parts
01	Metal Construction Set	154	C01 154
02	ditto	220	C02 275
03	ditto	415	C03 475
04	Gear Set with Motor	205	C04 205
05	Harbour Crane	447	C14 447
06	Jeep	256	C10 259
07	(Articulated) Truck	514	C07 514
08	Tractor with Trailer	452	C12 412
09	Helicopter	205	C20 321

SUMMARY OF MANUAL. #Name: TEMSI #Details of maker: N.V. TEMSI, Hengelo (O.) #Dates &/or Ref Nos: none. #Page size: 241x154mm deep. #No of pages: 24 inc covers, no page nos. #Language: Dutch. #Printing: Models are sepia halftone photos; cover similar with red/white lettering. #Page No of Parts



List & highest PN: 23,63 (illustrations on pp16-17). #[no Set Contents] #Sets covered: 0,1,2. #No of models for each set: 20,15,25. #Name, Model No, Page No of first & last model of each set: 0: Wagen,1,3; Perronwagen,20,5. 1: Draaibank,21,6; Schommel,35,8. 2: Draaibrug, 36,9; Lift,60,15. #Other notes: the parts for each model are given on pp18-22.

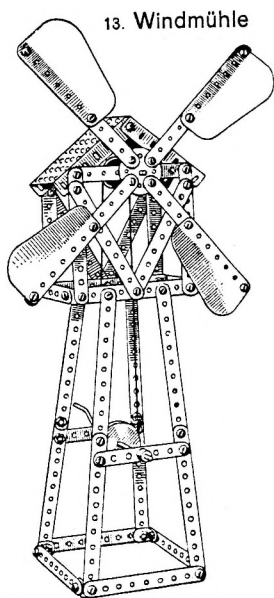
SUMMARY OF MANUAL. #Name: TEMSI #Details of maker: TEMSI N.V., Hengelo. #Dates &/or Ref Nos: none. #Page size: 243x156mm deep. #Number of pages: 16 inc covers. No page numbers. #Languages: Dutch, French. #Printing: models are B&W halftone photos. Coloured cover has green crane on yellow



ground with black, white, red lettering. pp7-10 are on green paper. #Page Nos of Parts List & highest PN: 7 and 10; 99 (parts are illustrated on pp8-9). #[No Set Contents] #Sets covered: 00,0. #No of models for each set: 12,20. #Name, Model No, Page No of first & last model of each set: 00; Sabre/Sabel,1,3; Séchoir/Droogrek,12,4. 0: Chariot/Wagen, 13,5; Chariot de quai/Perronwagen, 32,12. #Other notes: a Motor, Transformers and various Sets are shown in colour on the back cover.

old basic sets C01 to C04 have survived though with fewer parts in 2 of them, and 5 of the earlier theme sets are still listed but their set nos. have changed and the part count has reduced by about a third for the Helicopter. There is no mention of the old C06 Accessory Set which contained Plastic Plates. New are 10 Sets, called Startboxes, each to make a single, small model. Details are given below.

Set No.	Startbox
81	Articulated Lorry? (LKW Sattelaufieger)
82	Tanker Lorry
83	? Lorry? Pickup? (LKW Lader)
84	Low Loader
85	Helicopter
91	Racing Car
92	Mobile Crane
93	Lorry and Trailer
94	Recovery Truck
95	Roundabout



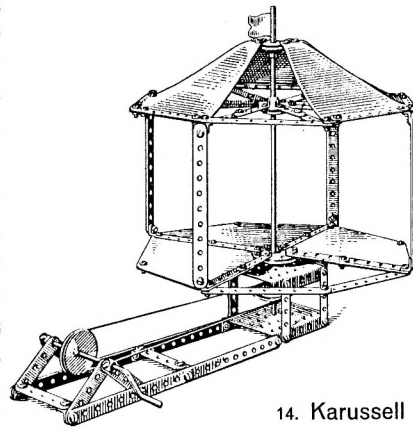
13. Windmühle

SOME A.W.S. DETAILS A.W.S. is included in MCS Part 5 but Ernst Leuthold was recently kind enough to send me a manual and a Strip from this simple German system, and these add a little to what's in MCS. A.W.S. stands for Aluminium-Walzwerke Singen, which means the Singen (a town) Aluminium Rolling Mill, and as might be expected from that, the parts are indeed aluminium.

Apart from Axles, Pulleys, N&B, etc, the only parts are 7x5h Flanged Plates, with flanges along the longer sides, 4 lengths of Strip, and 3 types of unusually shaped plates. These parts can be seen in the 2 models shown opposite. One of the Segment Plates has been removed from the Roundabout to show the detail underneath. The Strip is 12.0mm wide to match the hole spacing, and is well made with fully radiused ends. It has a light grey metallic finish and has probably been anodised; coloured anodising is promised in the manual but no coloured parts have ever been seen.

There's no date in the manual but prizes in RM (Reichsmark) are mentioned and this currency was in use between 1924 and 1948. Probably A.W.S. dates from the 1930s.

SUMMARY OF MANUAL #Name: A.W.S. LEICHTMETALL-BAUKASTEN #Details of maker: ALUMINIUM-WALZWERKE SINGEN G.M.B.H., SINGEN-HOHENTWIEL #Dates &/or Ref Nos: none #Page size: 203x144mm deep. #No. of pages: 16 plus covers. #Language: German. #Printing: cover is silver with black lettering; models are line drawings. #Page No. of Parts List/ Set Contents & highest PN: 16,16d #Sets covered: 1 (no No.) #No. of models: 15. #Name, Model No, Page No. of first/last model: Rollwagen,1,3; Russische Schaukel,15,15. #Other notes: prices on p2 are in RM.



14. Karussell



ORSTA PNEUMATIC SETS Some notes on the P01 and P02 Sets appeared in 4/65, 6/132, 7/156 and 10/267; now José Moreno has been good enough to send me a copy of the Manuals for these Sets, and these give a few more details.

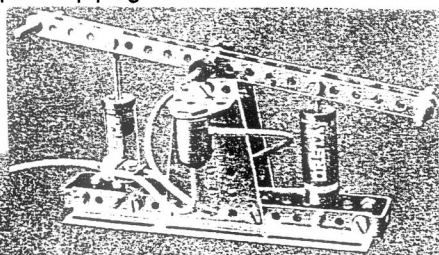
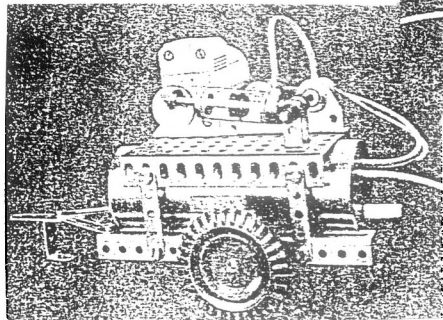
Each Manual is A4 size and has 8 pages including covers, all in German. Several pages of each are given over to technical matters, how pumps and jacks work, and the symbols used in hydraulic circuit diagrams. I can't follow these in detail but a few dimensions, pressures, etc, are given which are of interest. The Tank has a volume of 220cm³, and it takes 3½ minutes for it to be pumped up to the blow off pressure of 50kPa, that's about 7psi (above atmospheric). The Pump Cylinder has a bore of 12mm and a stroke of 20mm; and it's driven by the geared Motor running on 4.5v. The piston in the Actuator has a dia of 16mm and a stroke of 40mm. The maximum force it can exert is 5N, about 1Lb. That's rather less than the theoretical 1¾Lb that a pressure of 7psi would give acting on a 16mm piston but no doubt there are considerable losses in the valves, etc. Another force of 3N is quoted as the 'Stellkraft am Wegeventil, maximal', which may mean the force needed to operate the Multi-way Valve #3002, but it sounds a bit high for that. The nominal dia (bore I suppose) of the plastic piping is 2mm.

The P01 Manual shows 4 simple models, all on one page with a small photo each, plus a circuit diagram. All need a CONSTRUCTION C01 or C02 Set to provide the structural parts. There's a Hand Pump, a Foot Pump, a Mobile Compressor, and a double ended, old fashioned (alten) Hand Fire Pump: it needs two P01s. The photos won't reproduce well but I'll include the last two, to give an idea. On the next page of the manual are small photos of 6 models using the P02 Set as well.

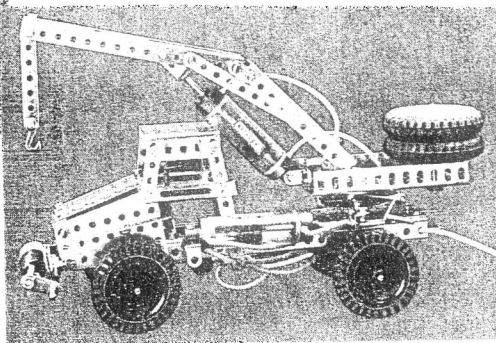
There are 6 models in the P02 Manual including 4 of the P02 models shown in the P01 Manual, and their photos are no bigger, just the circuits have been added. That's OK for the simpler models such as a 'Hydraulic' Crane, but grossly inadequate for the most complicated, a Hammer which needs Sets C03, C04 and two C06 as well as the pneumatic parts. The model of the Crane Lorry is shown here; others will be in a new MCS Extra Sheet, though again they won't come out clearly.

There is a print reference on the back cover of the P02 Manual, III/7/1 Jc 019/87 8.0 9896: it differs from the one given in 4/65 and if the '85' in the latter were to refer to a year, ORSTA would have been available for some years.

Druckluftverdichter, fahrbar
gebaut aus den Baukästen:
1 Stück »construction« C02
1 Stück »ORSTA-modelltechnik« P01



Handkolbenverdichter, doppelwirkend,
in Form einer alten Feuerspritze
gebaut aus den Baukästen:
1 Stück »construction« C02
2 Stück »ORSTA-modelltechnik« P01



Autokran
gebaut aus den Baukästen:
je 1 Stück
»construction« C03
»ORSTA-modelltechnik« P02

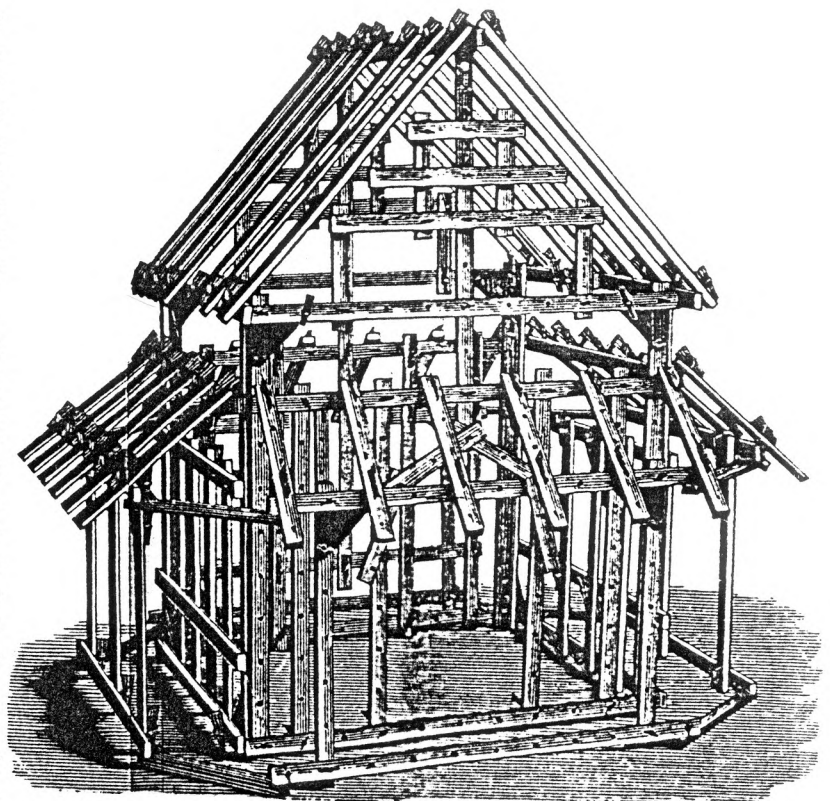
THE 1888 LILIENTHAL PATENT Toby Haffter sent details of this German Patent, and some illustrations taken from it which had previously appeared in the Swiss AMS Bulletin. The Patent No. 46312 was granted on the 8th April 1888 to Otto Lilienthal and was the first known patent for a constructional system which contained a number of MECCANO-like features. It was though confined to static structures, there was no mention of rotating parts.

The parts are wooden, mainly Strips of different lengths with equispaced holes in them. They were to be held together by flat wire Pins (Fig 18) which passed through the members to be joined and were held in position by Wedges (Fig 17). 6 Pins of different lengths are shown, plus a curved one (Fig 24 and 24a) which was used to attach two Strips at right angles (Figs 5, 6 and 11). Fig 6 also shows the use of a corner brace (Fig 25). One Strip (Fig 26) has a forked end and its use to support the ridge member can be seen in Fig 3.

More complex assemblies are shown in Figs 8 and 12: in the former the Pins holding the outer members must pass between the inner Strips, and in Fig 12 the Pin securing the end Strip seems not to have a Wedge but is held by passing around the vertical Pins. That would have given a sloppy joint unless the Pin was exactly the right length. In PHANTASIE the Pin's effective length could be decreased by putting one or more washers under the head but in that system there was only one length of Pin. The other thing I don't understand in Fig 12 is how the two parallel Strips are spaced apart.

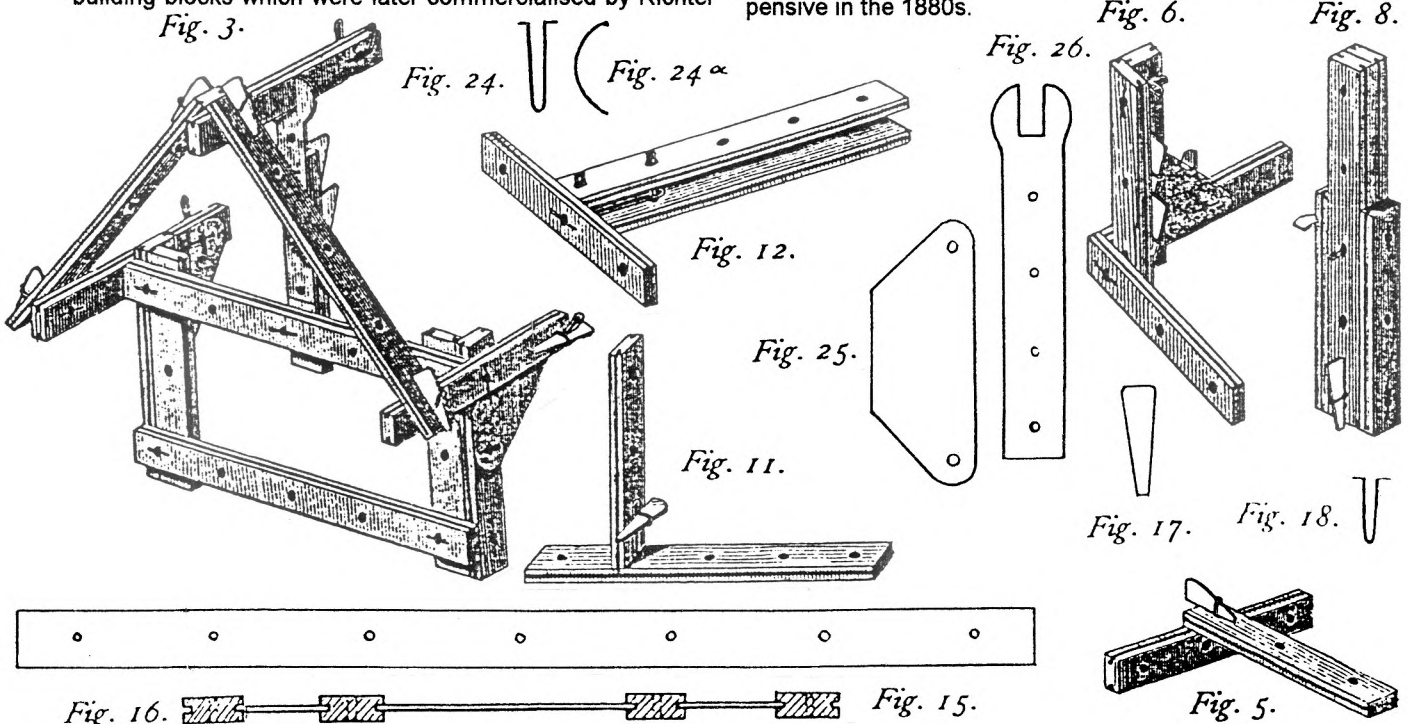
There is a groove in the edges of the Strips which allowed plates to be located in them (Fig 16). These it is suggested in the Patent, could be made of card or other suitable material.

There is a page or two in 'Bauklötze Staunen' about the parts, and about Otto Lilienthal and his brother Gustav. I can't follow much of it but one or other of them, or both, were aeronautical pioneers, and also originated the stone building blocks which were later commercialised by Richter



under the name ANKER. One model of a small Bridge is shown using the 1888 parts and it is ascribed to an 1888 Gustav Lilienthal Outfit (Modellbaukasten von 1888). But I'm not sure whether such Sets were sold commercially. No dimensions are mentioned in the Patent, but the overall size of the Bridge is given in the book and by scaling, the Strips are some 10mm wide and the pitch of the holes is about 25mm.

The method used for joining the Strips is essentially the same as that used later in PHANTASIE, already mentioned, and ENGINEERIT. In a 1920s Manual for the former it is claimed that the Sets were the cheapest on the market, and no doubt this would have been in part because the wedge method was much cheaper than using N&B. The Lilienthal brothers were obviously well up in technical matters and their choice of wedges was probably again made for cheapness - N&B would have been relatively even more expensive in the 1880s.



SMALL ADS

• WANTED: the group Constructorama, 23, rue Thenard, 10800 Saint-Julien Les Villas, France, seeks information on the following systems: MILO, MECO, WI-DI, WALU-METALL, DORFAN, PIC, JUNIOR, MARX, K.DO, TAKA, TECNIO, MÉCAFER, TRIC ET TRAC, MONITEUR EL, BATIFIX, MULTIMAKE, USINAUTO, COSMOS, MEX, NEO-STRUCTOR, FALCO, TAK i HAK, STABILO, BOY, TECHNO, OMOCHIYA.

• If anyone can help by providing for sale or loan, any German, French or British TRIX Construction literature of any description, preferably pre-war, it would be a great help in the research that I will soon be embarking upon, the results of which it is hoped will be published. I also require pre-war boxed sets of any size, no individual or loose parts please unless they belong to the Sand Motor Set. Four sets that have eluded me and are urgently required are the Scientrix, the German equivalent Experi-Trix and Chemie-Trix, plus the Motosand (Sand Motor). Not strictly Trix Construction but very interesting and also required is the Trix Funk-Trupp (Morse apparatus). It would be helpful if you contact me first by telephone or in writing so that a discussion about the information or the items on offer can take place -

A. Matthewman, 12 Ballagarey Road, Glen Vine, Isle-of-Man, IM4 4EA. Tel: 0624 851 693 or Fax: 0624 852 329.

• For sale. Parts and model leaflet (no box) from two Chinese CONSTRUCTION MODELS No.2 Sets. S/driver and Cord missing from both. Older Set missing 2 Clips and about 15 N&B, its leaflet shows green plastic plates not the yellow of the actual parts. Leaflet of newer Set selotaped together. Price £5 each plus post, from the Editor. (Each weighs about ½kg.)

• Several CONSTRUCTION (E. German) No.101 linking sets for sale. See MCS for contents. Unused with all packing but boxes may be a little damaged and a few of the nickel parts may show slight rust. Quite nice overall though. There was no manual in this Set. Price £6 each plus post, from the Editor. (Weight about ¾kg.)

• For sale. The #7 and #14 Indian PLANO Sets described in OSN 10 (p258). They are unused and believed complete, including manuals, but the boxes are a little battered and a few parts in the #14 have also been damaged in transit. They weigh about .6 and 4kg respectively. Offers to the Editor please by the end of November.

• For sale. 1931/32 No.7 ERECTOR red wooden box. Somewhat scratched and label faded; complete with all external (rusty) metal fittings but no inner tray/packaging. Beautiful full colour label inside lid showing model Excavator. Box contains over 80 well used parts (no N&B), about a third of the original contents, but some are from a later period. There are 8 Gears and 18" of Chain but no other 'interesting' parts. Weight 3kg, of which the parts are about half. £18 plus post, or offer, from the Editor.

• I am writing a history of STABIL for OSN and seek information on the following:

Manuals for Sets 53-55 of 1920 or earlier; Sets 49-52 of about 1924; the Erfinder-Baukästen (Inventors Sets) 57-58; STABILA (a Set

for girls); RECORD (wooden parts).

Any Parts Lists before 1936, and the names and numbers of the first and last models in any STABIL manual.

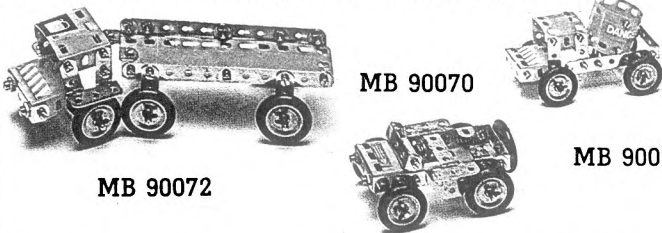
(Note. Manuals usually have their date on the front or back cover, together with the Edition (Auflage) No.)

Also wanted, a STABIL Ball Bearing, #146, or replica, and the Accessory Outfit 53a.

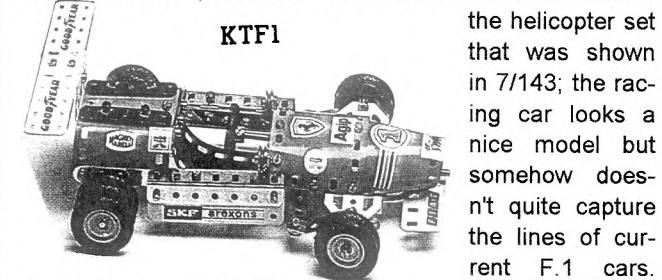
Please contact Werner Sticht, Henneberger Weg 10, D-97762 Hammelburg, Germany. Home phone: 9732 5387.

• INDEX for OSN 1-10. 7 A4 sides. From the Editor, price including post, £1.20 UK, £1.70 overseas.

Serie "i superkit" from BRAL René Mikkers kindly lent me a colour leaflet showing the 6 Sets in this new series. There's no date on it but these sets are currently available. There are 3 small model sets called 'miniBRAL': MB 90070 JEEP, 90071 BETONIERA [beton=cement], and 90072 TRUCK. As can be seen they are simple models and don't to me look quite as good as other recent small BRAL models, but no doubt they are cheap and easy to build.



Then there are 2 sets called 'bral MEDIUM': KTF1 90051 Kitcar Formula 1, and KTE 90053 Elekit elicottero. That's

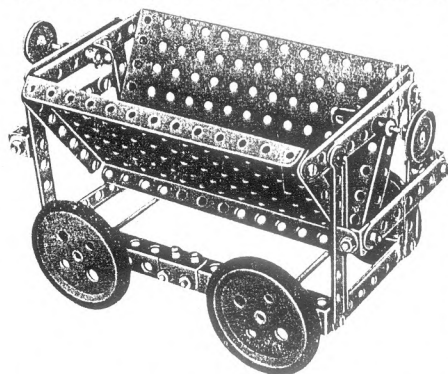


the helicopter set that was shown in 7/143; the racing car looks a nice model but somehow doesn't quite capture the lines of current F.1 cars.

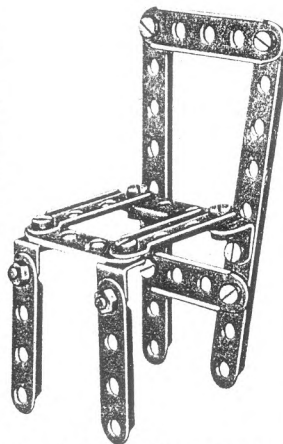
There is no sign of it being powered, but from its appearance, it may have working steering.

The final Set is a 'bral MAXI', KTC 90052 Camionkit, and 3 models are shown for it, all using the same chassis and a special cab which looks as if it's a one piece metal pressing, though it might be plastic I suppose. One of the models has a crane on the back, another a digger, and the third has

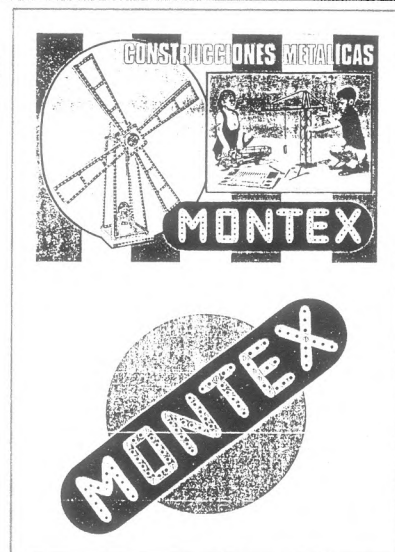
A MONTEX LEAFLET That's the Spanish MONTEX, with Strips that have lips on their straight edges, and 22-hole A/Gs, not MECCANO X under one of its aliases.



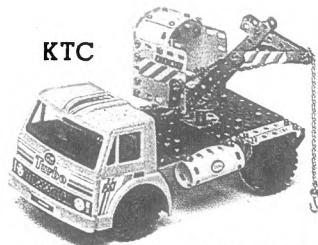
Courtesy of José Moreno I now have a photocopy of a 3-panel Leaflet which is different to the Leaflet or Manual on which the MCS entry is based.



There's nothing in MCS which actually shows the name but on the front cover of this Leaflet, there it is, not once but twice. Also on this cover are a Windmill, and small illustrations of the Set and the Crane in MCS. The large 'R' on the cover in MCS is on the back of the Leaflet and is the logo of Estampaciones Metálicas ROVIRA, and the factory address is given: Pasaje Rosé, 42; Hospitalet de Llobregat; Barcelona. Teléfono 337 25 40.



15 models are shown (including the Windmill) with just a halftone of each - no Model No., title, or list of parts required. The models range from a simple Chair to the Crane and Big Wheel shown in MCS.



KTC

a dozer blade mounted at the front. The illustration on the box shows a spare wheel on top of the digger's cabin.

The parts in all but the Camionkit look to be in standard BRAL colours, and are predominantly red and nickel. A few parts may be nonstandard, such as a black Flexible Plate as the driver's seat in the Racing Car. The cab of the Camionkit looks an orangy yellow and the Plates in it are either yellow or black.

René also sent a list of BRAL parts and this shows no changes since those noted in OSN 9/227. Part 3011 bis is an 8-hole Wheel Disc but with an 8mm central hole. The A2000 motor (described in 8/190) is still current.

MÄRKLIN FOR 1994 Ernst Leuthold, Werner Sticht and Geoff Davison were all good enough to send catalogue pages showing the new Sets introduced for 1994. The main change is a new, large Outfit, m100 (ref 1080), and the E60 (1081) which converts the existing m60 into the m100. With 1454 parts in it, the m100 is a good size, about the same as a pre-1970 No.9 MECCANO. Few details are given but the two models shown (bottom right) include chain drives and a pair of bevel gears; two 'multipurpose' gears are also used in the Beam Engine as a 'sun and planet' linkage between the crankshaft and the connecting rod. No mention is made of a motor being included in the Set and there's no sign of one in the models. The counterweight of the fairground ride seems to consist of 8 thick, brass coloured solid discs of about 1½" diameter.

There are two other new sets for 1994. #1083 is a 'Unimog' theme set with 860 parts, and as well as the lorry opposite, 4 other models of the same basic type can be made, with two versions of each possible. I'm not quite sure what that means but the other lorry shown in the catalogue doesn't have the snowplough blades on the front. All the models have steering and some include a tipping mechanism. Again no mention of motorisation. The Tyres may be new, they fit onto the 2" Pulley.

#1060 is a 'Solar' add-on set for use with Outfits m50 upwards. It includes a new solar motor, 2 solar cells, and a propeller. The small model roundabout in the catalogue (centre right) is similar to the one that used to be shown for the obsolete #1008 Outfit, you may be able to just see the cells behind the model.

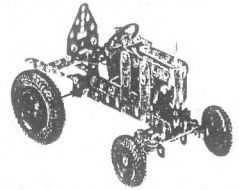
Also new are 4 packs of parts, 1067 to 1070. They contain respectively: • Axles, Collars, etc, • DAS and brackets. • 'mechanical' parts (pulleys, 2 pinions, pawls, etc), • pulleys, flanged discs, 4 large toothed Gear Rings (18 to 57 teeth), and 2 Tractor Tyres.

MÄRKLIN SETS IN 1991/92 Geoff Davison also sent copies from a '91/92 MÄRKLIN catalogue (in English and Italian) and this fits between the 90/91 range (OSN 5/83) and the 1993 additions (9/209). In 91/92 all the 90/91 sets were continued except the #1075 No.3

Nostalgia Outfit; likewise the 2 Motors and the Power Screwdriver. There were 4 new small sets, #1030, 1031, 1033 and 1077, see below. The pages Geoff sent made no mention of the packs of parts which had been available, or of individual extra parts. Other points of interest: • It won't be clear in the illustration but the rear mudguards of the Trac are made from special 3h Strips which are ready bent to shape. • The 1018 motor is said to be protected against electrical overload.

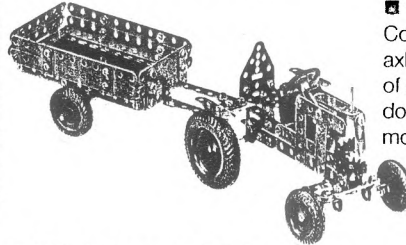
■ 1030 "Tractor" Gift Set.

Construction set for a tractor with working steering which is operated from the steering wheel. 167 parts. Length of the model 17,0 cm (6-11/16"). Models to supplement this one can be made with other Märklin Metall construction sets.

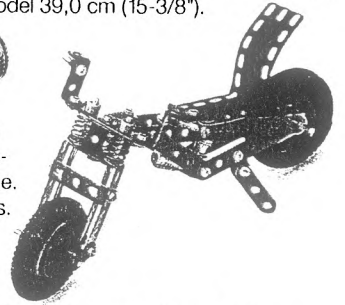


■ 1031 "Tractor with Trailer" Gift Set.

Construction set for a tractor with a single-axle trailer. Tractor is the same model as that of set 1030. Gale on trailer can be swung down for loading. 315 parts. Length of the model 39,0 cm (15-3/8").

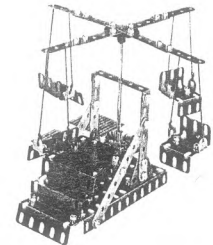
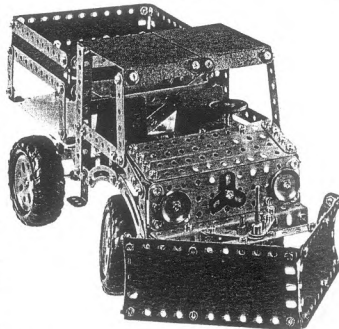
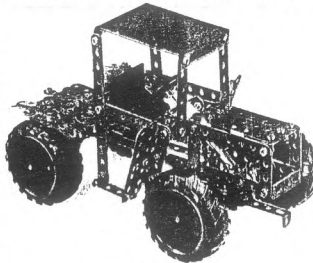


■ 1033 "Chopper" Gift Set. Construction set for a chopper motorcycle. Working steering and sprung suspension on the front axle. Simulated 2 cylinder V-type motor. 117 parts. Length of the model 27,0 cm (10-5/8").



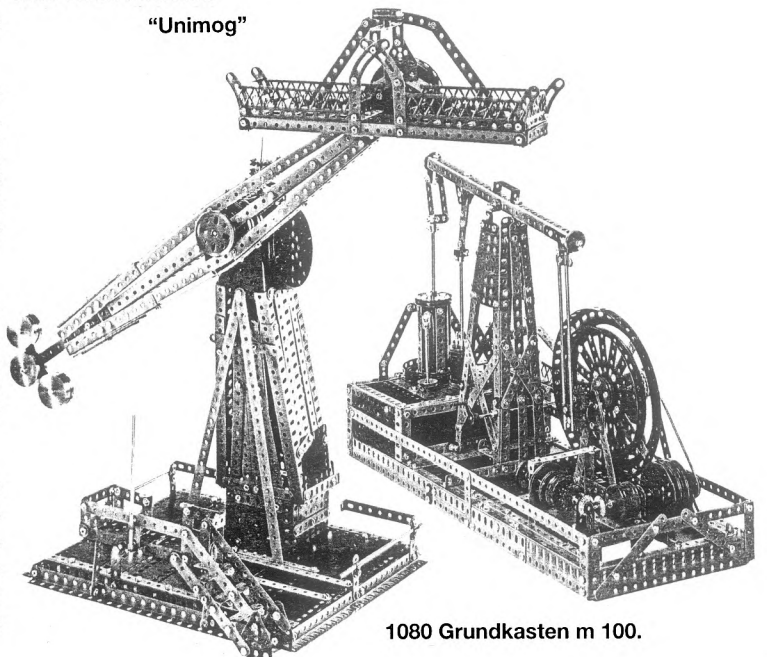
■ 1077 "Märklin Trac" Theme Set.

Construction set for a modern tractor. Scale about 1:16. New hollow tires with special profile. Working front axle with steering and independent suspension assures that all of the wheels are in contact with the ground even on rough terrain. 400 parts. Length of the model 27,5 cm (10-7/8").



1060 Ergänzungskasten "Solar"

1083 Themenkasten "Unimog"



1080 Grundkasten m 100.

ITEMS FROM LETTERS

1. On TEMSI hole spacing (9/225), D. Courdoux says you can bolt 25-hole TEMSI and MECCANO parts together successfully but of course an Axle Rod won't go through all the holes. Also slight changes in gear meshing, good or bad, can be noticed when using TEMSI Plates. He adds that TEMSI parts are strong and of good quality, and that the red colour they use is specific to them.

2. Al Sternagle wrote that he had come across some MECHANIMALS parts (see 4/66): they are larger than might be expected, for example R-1 is about 7½" long and MB-4 is some 4½" wide. He has many more parts than were shown in OSN, no doubt from the other 'animals' in the series - one triangular piece has a base of nearly 12". Only some of the parts are aluminium, the bulk are of a good quality steel alloy and quite durable, especially the links and joints. The aluminium parts are stamped with their PNs. The thread is probably metric and is about the size of a U.S. No.4. If anyone has the complete building instructions for any of the MECHANIMALS please contact the Editor.

3. On the MIGNON Ansatzmutter (10/263), there was general agreement that it wasn't a locknut. Both Geoff Davison and Don Redmond suggested that 'Ansatz' in this context implied joining or an extension. It's possible that if the part is threaded right through it might be used to join two threaded rods, but why then reduce the size at one end? Or is it intend to be used inside a curved structure to avoid the flattening caused when a normal nut is tightened? Possible but a nut with a radiused end would probably be cheaper and more effective. My favourite suggestion is that it is used with a normal bolt to create a non-sloppy pivot joint for two Strips. The length of the 'extension' would then need to be slightly longer than twice the thickness of the Strips. It doesn't look that long in the illustration and the other thing is that with a 2.5mm bolt in the 3.1mm hole in the Strip, the wall thickness of the 'extension' would be little more than 10 thou. I looked in the Manual to try to see how the part was used: 3 of them are called up for one model and that's all, even though there are 10 supplied in the #3 Set. There are 3 pivoted joints in the model where the Ansatzmutter could be used but it isn't certain that it is. On the other hand I can't see anywhere else in the model where they would be needed for any purpose.

4. René Mikkers sent several items which are included elsewhere in this Issue and also mentioned that he can supply TEMSI and BRAL parts. The leaflet he sent showing the range of TEMSI parts is identical to that in 3/40. He also sent an illustrated List of BRAL parts together with prices. MCS shows most of the parts but additions are illustrated in 7/143, 8/192 and 9/227, though the latter aren't in fact in his List. Prices, in Dutch Guilders, seem reasonable, for example, 1.00 for a 25h Strip, 3.75 for a 49h Angle Girder. Details from R. Mikkers, Wezelstraat 23, 7559AP Hengelo, The Netherlands. Tel: 074-774327 (after 19.00).

5. Eric Sinton sent a clarification of his remarks in 10/267(8): STOKYS Chain can of course only be used with STOKYS Sprockets. He added that when he dismantled the model in question, a Rack and Pinion Locomotive, which had worked faultlessly for many hours with its STOKYS Sprocket engaging MÄRKLIN Large Toothed Rings straightened into rack form, excessive wear of the Sprocket's teeth was noticed, and their rather 'knobby' shape had changed to something nearer an involute pattern!

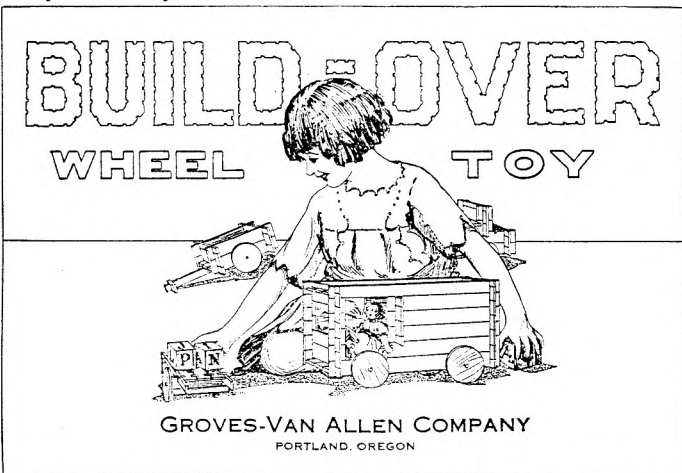
And on 9/227: BRAL Copriruota is a Wheelcover (Conical Disc in Meccanoese). The standard steel parts 3044,

45mm for the 50mm, and 3045, 66mm for the 75mm Pulley, have a narrow steel strip rivetted in the central hole. The ends of this strip are bent in such a way as to make it easy to clip the disc securely to the Wheel. The plastic version seems to have a stub axle (also in plastic?) which may indicate some use other than as an attachment to the 50mm Pulley.

6. Roger Baker confirmed my guess (10/247) that the output shaft of the MARBI motor can be repositioned in the corresponding holes on the opposite side of the motor. The drive is taken from the same large gear wheel which is, of course, centrally mounted.

7. Clive Weston wrote that a Mr Rod Moore, the curator of the Cumberland Toy and Model Museum, Cockermouth, Cumbria, Tel: 0900-827606, has several OS in his reserve stock, and that on a recent visit he was able to handle his large collection of ANCHOR blocks. The interesting feature of these sets was that the flat metal parts, apparently used to construct a framework with the stone blocks as infill, were joined by a rod method akin to that of DINKY BUILDER.

8. Kendrick Bisset sent details of a BUILD-OVER Set, but not the one with metal parts listed in my OS Database. Both were made in Portland Oregon, but by different companies, and the parts in this outfit are all wooden. Apart from Wheels and Axles, there are various notched Strips, about 3/16" thick, which slot into one another at right angles. There were 3 sets and the #3 model on the cover of the Manual (below) is called a 'Police Patrol', despite the lady driver. The parts are plain, untreated wood and are not very accurately made.



9. From Don Redmond: 'I saw a RICHTER set recently which contained two styles of braced girders. One was rectangular as in 10/261; the other was curved (humped) at the top.' And on MERKUR ALFI (MCS X1.2): 'The legend 'Vyrobce' etc. says: Manufacturer: Metal Enterprises, OPMH Broumov; I did not find 'stredisko' but it may be plant or unit. Does anyone know what OPMH stands for?'

In a later letter: 'In a toyshop in a town near Kingston [Ontario] I noticed a GIRDER AND PANEL set with the name Irwin Toys, of Toronto, the Canadian distributors of MECCANO, on the box. I didn't have the opportunity to open and examine the set, but the illustration much resembles other plastic architectural building sets.'

Don also mentioned an ERECTOR No.100 Set he has acquired, which probably dates from the 1950s. The box is 10½x9x¾" and the lid has the same design as that shown for EL NUEVO ING. ARGENTINO in MCS. There is no manual but a sheet pasted inside the lid shows 10 models. It has the code M3366 on it while the lid has M3409. The

contents of the set include 4 A, 4 B (Strips), 4 P79 (Trunnions), 1 FO (Flgd Plate), 2 GX (DAS), 2 3" Axles, 4 plastic/rubber Collars which grip the Axles, and 4 blue plastic, 1½" dia Road Wheels which fit loosely on the Axles.

10. David Hobson wrote that he had obtained the ULOX Patent mentioned in 10/254 and it appears the the 'edge slots' were intended to allow extra strips to be put in place with a slack nut and bolt in position in the slot.

11. Tony Matthewman's book, 'The History of Trix H0/00 Model Railways in Britain', has now been published by New Cavendish, and he wrote that although the TRIX constuc-tional system is only mentioned as part of the history of the Trix companies and their products, there are a few colour pictures, comments and passages which may be of interest to OSN readers. He intends to write fully about the system in the near future, see his ad asking for help elsewhere in this Issue. Tony also added that TRIX is still in production in Nürnberg and will continue, according to the Company, 'as long as there are customers'.

12. Werner Sticht sent a couple of recent leaflets for the well known BAUFIX wooden system. One is English, French, Italian and Spanish, as well as German.

13. On the plastic BUILDERIFIC (10/267) Gaston Marette wrote that the ref. of the Set is No.24135 and it sells in Belgium for 5-600 BEF (around £10). It is made in China and is distributed by REDBOX of 200 5th Avenue, New York, NY 10010, and Victoria Lane, Swinton, Manchester, M27 3LF. The box presentation imitates the Meccano Techno sets. Some parts are exact copies of Plastic Meccano parts, but not all are compatible and the thread is different. In the recent past it was sold in Belgium as BLUE BOX educa-tional toys and the parts were moulded in Singapore.

Gaston wonders if the 5th Avenue address is simply that of the of the TMA (Toy Manufacturers Association of the U.S.A.). [In the UK a smaller BUIDERIFIC Set (168 parts in a vertical box) is listed in the current 'Index' cata-

logue at £9.99.]

On hole pitch (10/237) he points out that any error is minimised by measuring over as many holes as possible and then dividing by the number of pitches spanned.

14. On p272 of this Issue Werner Sticht points out that in Germany the name 'Stabil' was synonymous with MCS, and Geoff Davison provides a nice example of this from a book he read recently about a wealthy German family. One of the housemaids is described as a real treasure who could do all sorts of things, like making dolls' clothes and finding missing nuts and bolts from 'Stabilbaukasten'. Geoff added the he could do with someone like that!

15. José Bernal sent some details of the Philips ELECTRONIC ENGINEER Outfits. They contain a selection of electrical and electronic components and to build a 'circuit' the appropriate layout sheet is attached to a wooden [?] perforated base board which also carries batteries, controls and the like. Holes in the layout sheet correspond with holes in the board and show where spring clips are to be pushed through to hold the connecting wires, components, etc. The manual covers 2 sets, the EE 8 and the EE 20, and it came in 2 parts, with the theory in Vol 1, and the instructions for making 22 circuits in Vol 2. The first part has been mislaid but José kindly sent a copy (in Spanish) of the second. Among the projects that can be made are a 3-transistor radio receiver, a Morse trainer, a time switch and an electronic organ.

Philips ELECTRONIC and RADIO Outfits were advertised in MM between 1964 and 1969, first the EE 8 with an add-on A 20 Set, then in 1966 the EE 20 was introduced with the A 20 as a linking set. The EE 8/20 shown in the Spanish manual in no doubt the same. Then after a gap of 2 years an EE 1003 was advertised with no mention of the earlier sets. This allowed 24 models and it was said that more could be built by combining the Set with their Mechanical Kit ME 1201, shown alongside, but no details were given. The Philips Mechanical Sets were sold in America under the name Norelco, but I don't know if there were equivalents to the ELECTRONIC Outfits.

EXTRA MCS SHEETS The Sheets listed below are available at 15p per Sheet plus postage. That makes £4.65 + post for all 31 Sheets.

MCS Amendments, List No.1 [1 Sheet]

ALUMINIUM CONSTRUCTION OUTFIT: X1.2/5 [1 Sheet]

BOYCOY: X1.1,2,3/4/6,5 [2 Sheets]

BUILD0 [2]: X1.1,2,3/4,a,5,7 [3 Sheets]

BUILD-X: X1.1,2,3/4,5 [2 Sheets]

ELGIN: X1.4 [1 Sheet]

JUNEERO [1]: X1.1,2,3/4,4a,5,a [3 Sheets]

KNIRPS: X1.1,2,3/4/6,5 [2 Sheets]

KONSTRUKTOR UNIVERSAL'NYI: X1.1,2,3/4/6,a,5 [3 Shts]

LIONEL: X1.3/4a,7a [1 Sheet]

MAXHINA: X1.1,2,3/4/6,a,5 [3 Sheets]

MECOTECH: X1.1,2,4/6,5 [2 Sheets]

METALLIRAKENUSSARJA: X1.1,2.4/6,a,5 [3 Sheets]

ORSTA: X2.5,a [1 Sheet]

PRIMUS BIG WHHEL: X1.2,3/6 [1 Sheet]

STEEL CONSTRUCTION KIT SERIES: X1.2a,4/6 [1 Sheet]

STRICON: X2.3/4/6a [1 Sheet]

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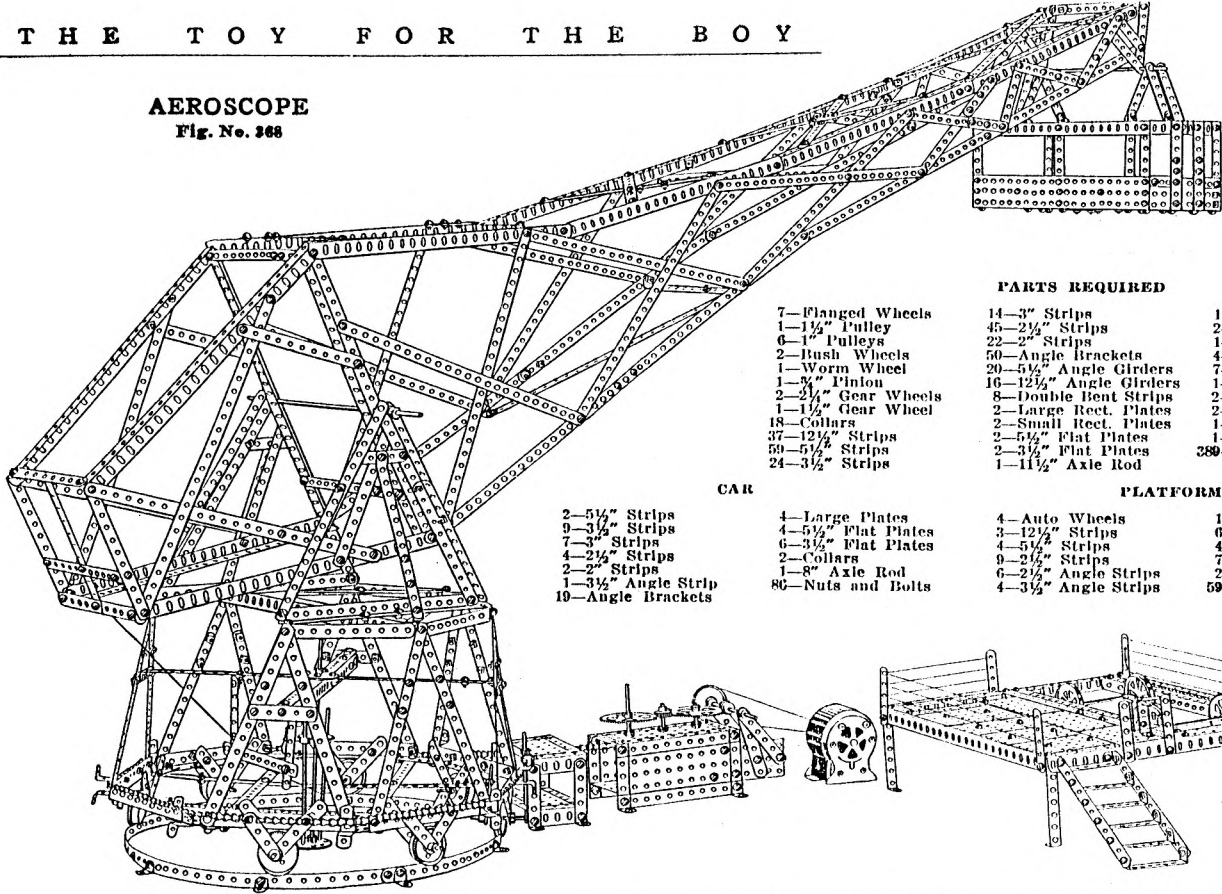
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AEROSCOPE
Fig. No. 368



PARTS REQUIRED

- | | | |
|-------------------|-----------------------|--------------------|
| 7—Flanged Wheels | 14—3" Strips | 1—8" Axle Rod |
| 1—1½" Pulley | 45—2½" Strips | 2—5" Axle Rods |
| 6—1" Pulleys | 22—2" Strips | 1—4½" Axle Rod |
| 2—Rush Wheels | 50—Angle Brackets | 4—3½" Axle Rods |
| 1—Worm Wheel | 20—5½" Angle Girders | 7—3" Axle Rods |
| 1—3/4" Pinion | 16—12½" Angle Girders | 1—6½" Crank |
| 2—2½" Gear Wheels | 8—Double Bent Strips | 2—4" Chains |
| 1—1½" Gear Wheel | 2—Large Rect. Plates | 2—4" Sprockets |
| 18—Collars | 2—Small Rect. Plates | 1—1½" Sprocket |
| 37—12½" Strips | 2—5½" Flat Plates | 1—No. 150 Motor |
| 59—5½" Strips | 2—3½" Flat Plates | 389—Nuts and Bolts |
| 24—3½" Strips | 1—11½" Axle Rod | |

CAR

- 2—5½" Strips
- 9—3½" Strips
- 7—3" Strips
- 4—2½" Strips
- 2—2" Strips
- 1—3½" Angle Strip
- 19—Angle Brackets

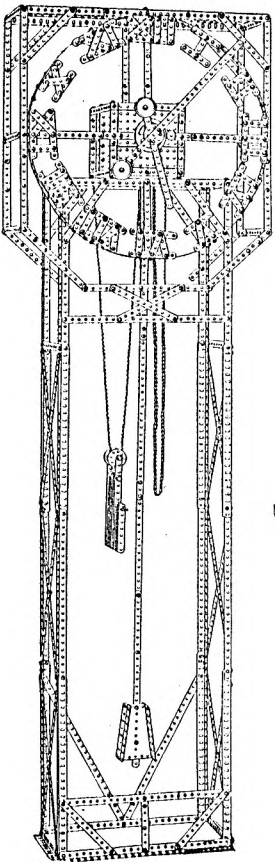
- 4—Large Plates
- 4—5½" Flat Plates
- 6—3½" Flat Plates
- 2—Collars
- 1—8" Axle Rod
- 80—Nuts and Bolts

PLATFORM

- 4—Auto Wheels
- 3—12½" Strips
- 4—5½" Strips
- 9—2½" Strips
- 6—2½" Angle Strips
- 4—3½" Angle Strips
- 1—Single Bent Strip
- 6—12½" Angle Girders
- 4—Angle Brackets
- 7—Small Plates
- 2—0" Axle Rods
- 59—Nuts and Bolts

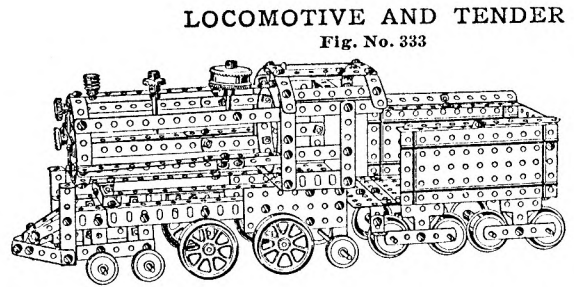
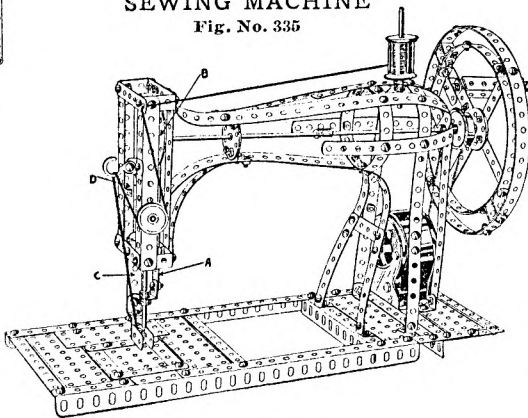
The Model shown on this page can be made with The American Model Builder Outfit No. 7, or with No. 6 and No. 6½ Combined.
HALF THE FUN IS BUILDING THE MODELS—THE OTHER HALF IS OPERATING THEM WHEN COMPLETED.

Models from a 1915 American Model Builder manual. The Clock mechanism is shown on p279.



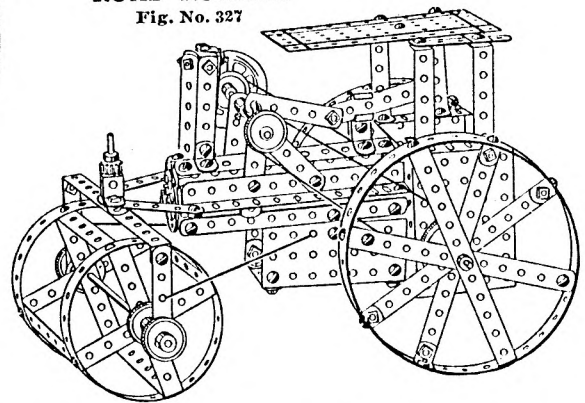
GRANDFATHER'S CLOCK
Fig. No. 369

SEWING MACHINE
Fig. No. 335

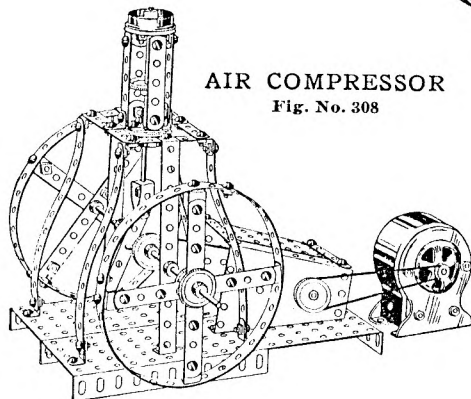


LOCOMOTIVE AND TENDER
Fig. No. 333

ROAD ROLLER
Fig. No. 327



AIR COMPRESSOR
Fig. No. 308



BIPLANE
Fig. No. 188

