

AMERICAN MODEL BUILDER AND CASTLE BUILDER Looking at these systems in MCS there are many points of difference between them but there are also some remarkable similarities. In particular many of the illustrations of the parts are identical and some of the parts common to both systems are unusual. For example the 2x1x4 hole DAS called in each Hanger Strip, and then both have 3 Cranks (MECCANO Crank Handles) 4½", 5½" and 6½" long. Was this a case of straightforward copying or was there some connection between these two systems?

[I had suggested to Don Redmond that there might be a connection and he responded: "There are some intriguing coincidences in the illustrations of parts in MCS, but not as many as would be expected if there were any actual linkage between the manufacturers/distributors. Would it be more likely that some parts were bought in, probably by Castle? Or just designs copied? AMB copied Hornby, so probably AMB designs were not as closely protected as they might have been - Hornby won his suit. Incidentally the AMB screwdriver illustrated was almost certainly a commercial 'bought in' part, as it is identical with a screwdriver used for the White Rotary sewing machine of approximately the same period (c1917-20)".]

SMALL ADS

WANTED: VOGUE nuts & bolts. D.A.Redmond, 9 St. Catherine St, Kingston, Ontario K7K 3R9. Canada.

WANTED. • To complete a boxed No 6 KLIPTIKO set - original manual, one of each of the following parts:- Large Chute Side, 3-3/4" Wheel, 1½" Wheel, 10" Bent Tube, 6" Bent Tube, Hook, Bucket, Cord; also 2 Cables, 3x2" Tubes, 2x4" Rods, 8x6-5/8" Tubes, 17x10" Tubes, 20xHub Caps, 2xHalf Clips, 17x4" Clips. PX or cash.

• Info and/or details on internal arrangement of No 3 STRUCTATOR set (thought to be later set as it has square steel Joints).

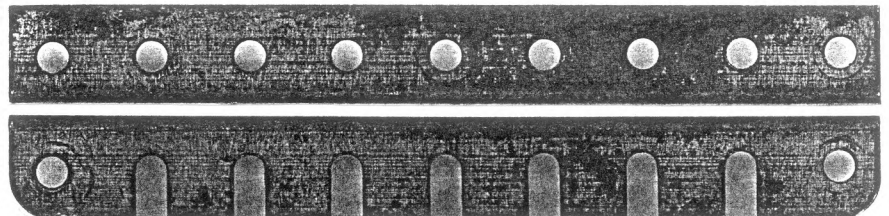
• Any N-G-NEERO parts especially Hole Punch, Screwdriver, Instruction Manual, Model Plans and 'consumables'.

Contact Roger Baker 079 710358.

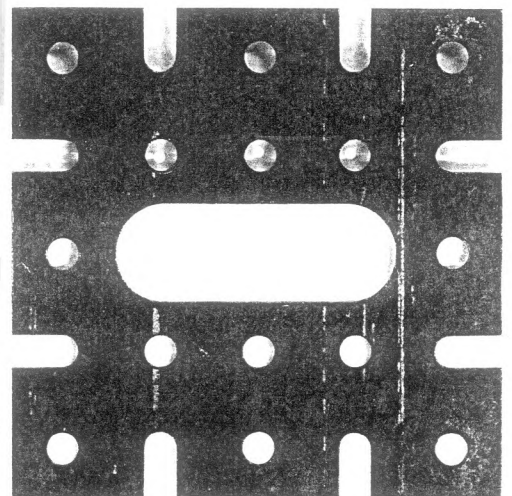
MYSTERY PARTS NO 14 ULOX

Strips and Discs turn up fairly often and with a few of them recently was the Plate opposite, and then with another half a dozen or so, a Plate and the Angle Girder. Their finish is typical ULOX grey plating

except that the second Plate is painted dark red; the paint doesn't look very even though so it may have been put on by a previous owner. The hole spacing and diameter is the same as ULOX parts, 13.0 and 4.1mm. Can anyone confirm that these are ULOX? Also is any literature or sets of ULOX known, there must have been some but all that has ever been found are several of the small tins of parts that are shown in MCS.



MYSTERY PART NO 15 From Don Redmond, "Two separate groups of brackets, including Reversed Angle Brackets, Double Brackets, and in one group also Flat Brackets (Fishplates) and an Angle Bracket. The peculiarity is that the Double Brackets are stamped from the same piece as the Reversed Angle Brackets, ie there is a slot in one lug. One group has Double brackets 5/8" across (not quite as wide as the old style MECCANO part); in the other it is 9/16in."



MYSTERY PART NO 16 Another from Don - "The Strip opposite, 1/16" short of 4", .033" thick, nickel plate, 4 holes at 20mm spacing and 20mm from the ends."



AMERICAN MODEL BUILDER. This system is famous chiefly as the object of Frank Hornby's litigation for patent infringement in the U.S.A., see Love & Gamble, *The Meccano System* p.50. In fact AMB had some features in advance of Meccano: setscrew fixing of wheels, for example. Two sets have now come to hand, a No.2½ and a No.3. The 2½ was an accessory (linking) set. Box labels hint at dates and may throw light on differences from Love & Gamble's Fig.86. The labels are similar to the manual cover shown in MCS, in red, black, cream and pale greenish-blue; the background wallpaper has broad vertical bars of buff and greenish-blue, not evident in the MCS copy. In the lower panel is: "The world's greatest mechanical wonder | Indestructible, highly entertaining, practical and instructive | All mechanical principles clearly demonstrated." The Set 3 box has the bottom legend as in MCS, "Patented in Canada July 29, 1913 | U.S. Patent applied for", but the Set 2½ box has "Patented in U.S.A. and Canada". Differences from the parts in Fig.86 suggest that changes had been made to some parts to avoid Meccano patents, and that these sets possibly date from 1914-15.

The only gear in these sets is a ½in. 14-tooth pinion, DP28, whereas Fig.86 shows 10-tooth pinions in both Meccano and AMB! As the Meccano DP always was 38 and the pinion originally 20T, is there legal or artistic imagination here? The AMB pinion in Set 3 is only used as a ratchet wheel; but the spring-steel early Meccano pawl, shown in Fig.86, is not in the set; instead the double pointed pivoted pawl, as in the MCS parts list. The pawl is loose on the rivet, so it is a rather uncertain device. The AMB pinion is bronze, 13/64in. face (5.16mm) with a slight ridge around the bore on the side away from the boss. This ridge seems to encroach 1 or 2 thou. into the bore; the reason for the ridge is not obvious. AMB rod size is .156in.

Two sizes of collar were found: 3/8in. dia. by 3/16in. thick (9.5mm x 4.75) in brass, and 5/16in. dia. by 3/16in. thick (7.94mm x 4.75) in steel. Shaft connectors #62 (couplings) both steel and brass are 5/16in. dia. by 5/8in. (7.94mm x 15.9). Setscrews are NC #6-32 with neat fillister (cheese) heads 0.155in. dia. (3.94mm) in grey finish, though other Erector-pattern setscrews were found (and some Erector parts in the boxes). The #65 car wheel (railway wheel) in stamped nickel plate has a setscrew slightly inclined to clear the rear of the flange. Bosses on 1in. pulleys are short, 19/64in. face to face (7.54mm) but in two sizes: 5/16in. dia. and 3/8in. (7.94mm and 9.5mm). One bush wheel 0.038in. thick (0.97mm) has a 5/16in. dia. boss, but another with 3/8in. dia. boss is unusually thick, 0.066in. (1.68mm); both are a full 1.5in. dia.

Strips are 0.032in. thick (0.81mm) the same as Meccano, a few 0.035in. Ends of strips are nearly 5/16in. radius, leaving definite corners. sometimes the end cut is off-centre leaving a distinct point or flash at the corner; holes are occasionally off-centre up to 1mm, or off-ended. The 25-hole strips are 0.040in. thick (1.02mm), angle girders 0.028in. (0.7mm). The slotted side of angle girders is noticeably wider than Meccano, 0.64in. (16.27mm).

Two types of 11x5-hole flanged plates were found, both with slotted flanges: one as in MCS with ribbed face, the other identical but with plain face in slightly thinner steel (0.027in. vs 0.032, 0.69mm vs 0.81). Both have square corners.

Distinctive angle brackets have a round hole only 1/16in. (1.6mm) from the tip of a very short 3/8in. arm, with large-radius ends. Obtuse angle brackets are in two styles, one as in MCS with two equal arms and round holes, the other like the 90° angle brackets. The #28 single bent strip is 13/64in. across with the AMB large-radius ends.

The #66 "truck frame" (trunnion) has a base flange four holes wide so the flange holes are midway between those in the face. Only 0.02in. thick (0.5mm) these would be flimsy in use. The #53 hook is unusual, in stamped nickel-plated steel 0.042in. thick (1.07mm). The #4 "flanged wheels" (flanged pulley wheels) 1-3/8in. overall (35mm) are the same size as the "car wheels" - there seems no good reason for both. The car wheels appear neater in a model because the boss is hidden, whereas the boss of #4 is outward when the "flange" is inside the rail.

Both steel (some nickel-plated) and brass nuts and bolts were found, NC8-32 by ¼in. long with round heads 19/64in. dia. (7.5mm). A 1.25in. nicked bolt and four 2.5in. threaded rods were found, not in the parts list, but some of such parts may not be original as there were Erector parts as well.

The spanner, not clear in the MCS illustration, has a round disc with U-slot riveted to the face, forming a pocket to hold a nut while placing it. The screwdriver is probably bought-in; similar ones came with the White Rotary sewing machine in the 1920s.

The mottoes of AMB, as reported by Joseph E. Freed, were "Half the fun is building the models, the other half is operating them when completed", and "The toy for the boy".

Don Redmond

[In the above Don is referring to the FB version of MCS; the NZ edition shows an earlier Parts List in which the appropriate illustrations correspond to those in L&G, and in which all Flanged Plates (#31,32,33) are shown without the 'ribs'. It contains only parts up to to #62. Also the (earlier)

manual cover in MCS/NZ has just 'Patent Applied For' in its bottom panel. Incidentally in both MCS versions the Pinion is shown with the correct number of teeth (14); the illustrations of pinions in L&G appear to be the 1" and 1½" Sprockets, #36,37.]

ERECTOR SENIOR and a little more on the GILBERT NEW WHEEL TOY. On the question of whether kids were meant to ride on the NWT models (8/198), there is a comment in Greenberg that the set did not work well in practice because boys who were big enough to build with it were too big to ride on the 'models'. And on the name, which I had noted as somewhat uninspiring, apparently ACG offered a \$100 prize for anyone who could offer an improvement. No one did and the set, which had been launched in 1919, was dropped for 1923, though ERECTOR SENIOR (introduced in 1922) carried on for another year.

And so to ERECTOR SENIOR, Greenberg says that it was the NWT under another name but in Peter McCall's 1923 Year Book, which it seems actually shows 1922 products, both the NWT and the SENIOR are shown, and it is clear that they are different. Many of the parts, some Brackets and the Gears for example, are probably common but the main structural parts are metal instead of wood and in the Year Book it says that the toy is 'built almost entirely of metal'. Two boys are shown riding on a Coaster!

The Year Book shows two sets, and both came with a model fully assembled, the Coaster for Set #15 and the Speedster for #20; the former has four NWT style Wheels but in the larger set two of them are replaced by 8" dia versions. Set 20 also has the large Gears. The models shown have a different flavour, there is no mention of Sleds but 3 Cranes, large and quite respectable looking, are featured. To confuse the historian one of the illustrations is the NWT Coaster. The Strips used in the Coaster/Speedster scale at only about ½" or a little more, wide but the holes seem to be at 2" pitch, as for the NWT. In the Cranes the hole spacing of the Strips appears to be 1" and 4 sizes can be distinguished with PNs W56 to W59; they have 27, 13, 7 and 3 holes respectively.

The new MCS sheet shows complete the 2 pages on ERECTOR SENIOR in the Year Book.

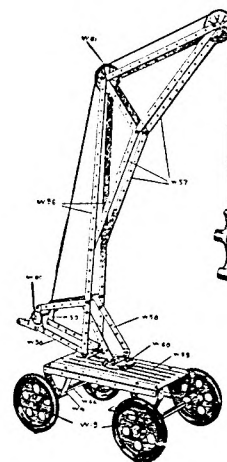
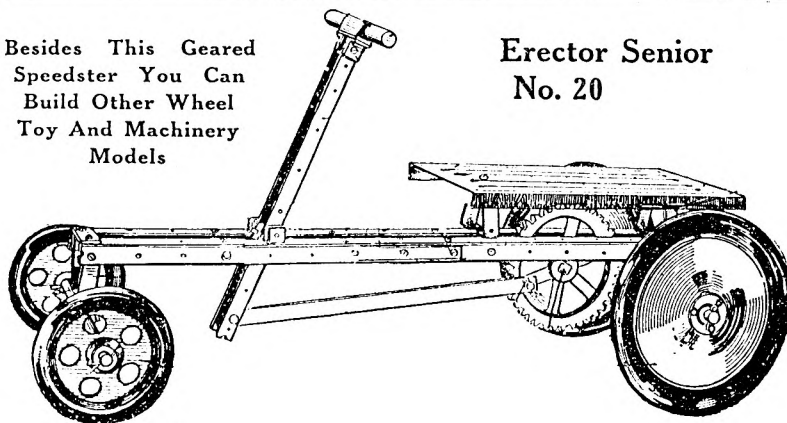
AMENDMENTS TO MCS PERIOD: 1919 to 1922. COMMENTS: Add 'See also ERECTOR SENIOR.'

AMENDMENTS TO INDEX IN OSN 6: NAME: ERECTOR SENIOR. TYPE: NM. CY: US. SPCE: 25.4x?

ERECTOR SENIOR

Besides This Geared
Speedster You Can
Build Other Wheel
Toy And Machinery
Models

Erector Senior
No. 20



TRANC MADERA. José Bernal Moreno sent a few more details of this wood/metal system (see 8/200), from a friend of his who owns a Set. All the metal parts are steel, including #1700 which is a Spanner. The Strips are about 33mm wide, and the pitch and diameter of the holes in them are approximately 36 and 6mm; the Bolts are 6mm dia. The Wheels are fitted with rubber tyres, o/d 6-1/16". And the Wheels are the only parts that are painted, light blue.

AMENDMENTS TO MCS: HOLE DIAMETER: 6mm approx. HOLE SPACING: 36mm approx. COLOUR: Unpainted except light blue Wheels. AMENDMENTS TO INDEX IN OSN 6: THREAD: 6x? SPCE: 36. dST: 6.

SMALL AD. FOR SALE. Nuts N-21 for Erector. Steel, plated nickel over copper. \$4.50/100; \$15/500; \$25/1000; 6-10000, \$20/1000; 11000 or more, \$17.50/1000. Shipping extra - Marion Designs, 594 Front Street, Marion, MA 02738. U.S.A. [These Nuts are ¼" square and are slightly thicker than MECCANO ones (.096"); they are very nicely made and finished. The thread is 8-32 but I've just used 350+ with MECCANO Bolts (5/32" BSW) without problem - Ed]

than standard; the 224 is no doubt a concentric drive to the hour hand and appears to have 13/40 teeth. The 10 and 40 could make a useful 4:1 but how the rest of the train would have been arranged I leave as an interesting exercise for the reader.

VEHICLE PARTS. The 1934 List contains a complete list of all the Chassis parts, and those for the 5 bodies that could be fitted to it -the Standard Tanker and the Mercedes Racing Car came later. This list, in German, isn't perhaps hot news but if anyone needs it please ask. In passing there are 48 Chassis parts (C1-C50) and the bodies typically have rather less than 20 each.

FOOTNOTES. • In the '29 List is #44a which I don't remember seeing before, its the 2 hole high Double Bracket, #44, similar to MECCANO #11a, with a boss on the bottom. • The contents of the Zusatzkasten will need to go into MCS together with other material that has appeared in previous OSNs.

INVICTA. At Henley last year José Bernal Moreno kindly brought over an INVICTA Set to show me, such outfits were on sale in Barcelona in the early 1940s. This system is called INVICTA 0 in MCS but the '0' is thought to be an error, the box lid has INVICTA on it but no '0'. Under the name is a ring with Modelo in it and a blank space underneath for the Set No; it is similar to the one on p2 of GOLIATH (a related system) in MCS/FB. There is a number in the INVICTA ring, it might be a 0 but it's too faint to be sure.

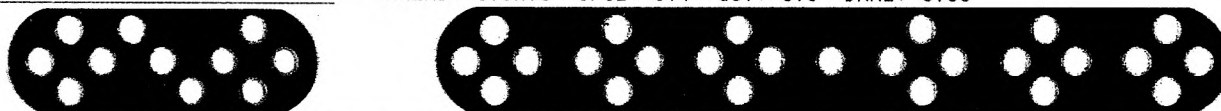
There was no Manual with the Set and it was not complete, but there was at least one of nearly all the parts that can be seen in the models in MCS. The most noticeable thing was the Strips: compared to those seen in MCS the 5 and 9 hole ones had an extra hole in each end (the shorter of them is shown below), and the 13 hole had the same extra holes but in addition the remaining holes were arranged differently (below). The holes in the DAS and the Angle Bracket were as in MCS. So were all the parts originally from this Set? All that can be said is that the finish is similar throughout and that their dimensions are consistent. Now a few comments on the parts:

- The average pitch of the holes in the Strips is 8.1mm, for comparison TRIX is 7.8. There are slight variations of up to .03mm between the 2 shorter Strips and along the length of the longer ones. Strips are .553" wide and .030" thick. The holes in the 26.5mm dia Disc have a pitch of 8.9 or 9.0mm. The dia of all holes is .154" except for the .142" dia centre hole in the 10 and 16mm dia Washers.
- The thread is 3.5x.8mm and so the Washers are a good fit on it but the Discs, with their .154" centre hole, are sloppy. Nuts are hexagonal, .252" A/F; the Bolts are 5mm u/h and have .200" dia tapered cheese heads. Only one size of Screwed Rod was present, 55mm in length.
- All the parts are steel with the screwed parts brass plated. The other parts were generally quite bright in appearance but it was hard to decide whether they had been plated or not, possibly they had a very thin coating of nickel. One side of one Disc looked rather brassy.

José provided some sketches of the parts as well as photocopies of the Strips and these are included in an Extra MCS Sheet. On the reverse side I've put the rather attractive box lid, it shows a small child with golden, curly hair, holding the Monoplane shown in MCS.

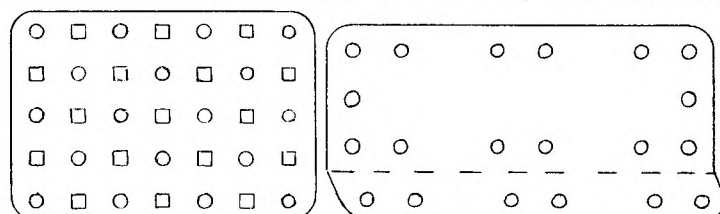
AMENDMENTS TO MCS (as necessary, depending on version): HOLE DIAMETER: 3.9mm. HOLE SPACING: 8.1mm. COLOUR: Unpainted steel or possibly nickel plated. PERIOD: add 'Also known from early 1940s.' COMMENTS: replace by: Parts similar to TRIX but with some holes omitted and slightly different hole spacing. See also GOLIATH. MATERIAL SUPPLIED BY: add: and José Bernal Moreno.

AMENDMENTS TO INDEX IN OSN 6: THREAD: 3.5x.8 SPCE: 8.1 dST: 3.9 DAXL: 3.58

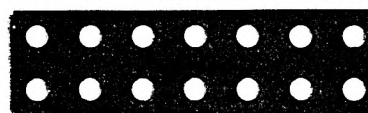


MYSTERY PART No.19. A heavy, nickel plated Flat Plate with alternate holes and squares, traced by Richard Symonds and shown here x.5. The actual pitch of the holes is probably exactly 7/16".

MYSTERY PART No.20. Another from Richard, a Flanged Plate 4x1½" with one ½" flange, again shown ½ scale. Of the 3 found, 2 were painted dark maroon and the third was unpainted. Don Redmond also sent some photos of an identical looking part, this one nickel plated. Since Richard lives on one side of Canada and Don on the other, this part may hail from Canada, or at least North America.



MYSTERY PART No.21. From Peter Kessler, a 2x7 hole steel Plate with 3.0mm holes at 7.0mm pitch, plated dull grey. Photocopied full size.



that: • The Bush Wheel and the 1" Pulleys are painted red; and the Hook is green. • The Screwdriver is the bent wire type, as in MCS; the #14 one has a brown plastic handle. • The N&B are slightly smaller at 6.1 A/F and 4.8 dia. • More important, the Axles are 3.58mm dia, though the Crank Handle is the 3.20 of the Axles in the #14.

It is believed that PLANO was introduced in 1961 (OSN 3/41), and it continued until 1990 (4/72); the manufacturer was Rai Toys Industries, Sitaram Bazar, Delhi. In the next Issue I plan to include details of MAXHINA, another, comparable, Indian system.

AMENDMENTS TO INDEX IN OSN 6: SPCE: 13.0* dST: 3.8 DAXL: 3.58*
SUMMARY OF MANUAL. #Name: PLANO #Details of maker: RAI TOYS INDUSTRIES, SITARAM BAZAR, DELHI-6 (on front cover). #Dates &/or Ref Nos: none. #Page size: 245x201mm deep. #No of pages: 48 inc covers, unnumbered. #Language: English, Hindi. #Printing: Cover is b&w on light blue ground. Each model has line drawing on black ground, plus black on white exploded views. #Page Nos of Parts List & highest PN: 46-48,98. #Page Nos of Set Contents & highest PN: 2,98. #Sets covered: #14. #No of models: 20. #Name, Page No of first & last model: ENGINE,5. CRANE,43. (no Model Nos.) #Other notes: Models are MECCANO 1962/69 Set 6 & 7. Basic Constructions BC1-14 are shown on p3.
SUMMARY OF MANUAL. #Name: PLANO #Details of maker: RAI TOYS INDUSTRIES, SITARAM BAZAR, DELHI (on back cover). #Dates &/or Ref Nos: none. #Page size: 205x128mm deep. #No of pages: 24 inc covers, unnumbered. #Language: English, Hindi. #Printing: Cover and models are white on black. #Page Nos of Parts List/Set Contents & highest PN: 2-3,71. #Sets covered: #7. #No of models: 28. #Name, Page No of first & last model: SWING,4. TRICYCLE ROUNDABOUT,23. (no Model Nos.) #Other notes: most models are MECCANO. 2 #8 models are shown on the back cover.



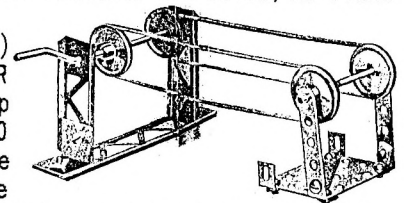
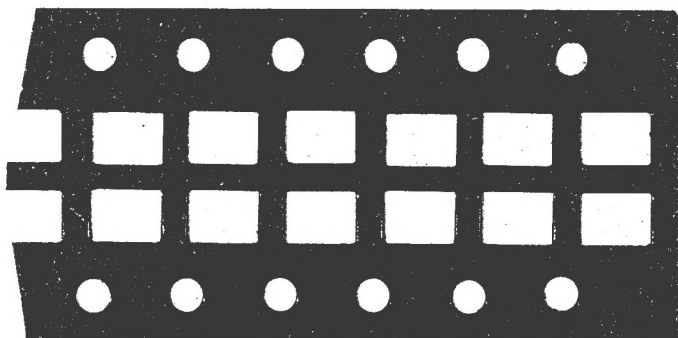
MYSTERY PARTS Kendrick Bisset sent some comments and also wrote, "Might it be helpful to identify the area where mystery parts were found? I realise that parts may travel far from their origins, but it seems that the U.S. is more parochial than even Canada; I find much more variety north of the border than here." This might certainly help in some cases and if contributors give me this information, where they think it could be relevant, I'll include it. His comments are below; he found the Parts #19 and 20 in the Chicago area.

MYSTERY PART No.1 (The ERECTOR 5x4h Plate, see 3/47 and 8/197) Kendrick sent a copy of the Instruction Sheet which was in his ERECTOR #0 Set. One side of it is generally similar to that shown at the top of p46 in OSN 3, with a the reference no., M 466, and the same 1920 copyright date at the bottom, and No.0 Erector at the top. On the reverse side are 9 models which include both the 5x4h Plate, old style wide ERECTOR Girders and 4 Pulley Wheels, as well as the 5 and 9 hole Strips seen in the OSN 3 models. No PNs are given for any of the parts. There is a mention in Greenberg of Sets #0, 00 and 000 although there are no illustrations of them and apparently they were never shown in ERECTOR catalogues, so it is possible that the leaflet shown in OSN 3 came from the 00 or 000.

MYSTERY PART No.19 (The Plate with alternate round and square holes, 9/222) He has a 3h Strip and 2 11h Angles which seem to be from the same system. The hole pitch is $\frac{7}{16}$ " (11.1mm) counting both square and round holes, and all holes are 4.5mm dia or wide. All the end holes are round. The Strip is 11.3mm wide and 1.2mm thick; the flanges of the A/G are about 15.2mm wide and .8mm thick.

MYSTERY PART No.20 (The 4x1 $\frac{1}{2}$ " Plate with one $\frac{1}{2}$ " flange, 9/222) No less than 9 of these pieces, all unpainted have been found among collections of ERECTOR, THE CONSTRUCTIONER and AMB parts, but do they belong to any of these systems? The holes are at $\frac{1}{2}$ " pitch and are 4.4mm dia except the end ones in the large face, which are 4.8. AMB lists and models show no such part, and the hole pitch is wrong for THE CONSTRUCTIONER, so ERECTOR seems the most likely - several poorly documented ERECTOR parts are already known.

MYSTERY PART No.22 The 6 holes worth shown is from the original 25-h part, and both ends are similar with the same extension beyond the outer holes. There are 25 pairs of cutouts and so they have a varying stagger in relation to the holes. The holes are 4.4mm dia and their longitudinal spacing is 12.5mm, but crosswise it's something less than 32mm. 3 of them were in a STABIL Set that Geoff Wright showed me recently, one painted red, one green, and one blue. The STABIL hole pitch is of course 12.5mm so that ties up, but none of the other parts were painted and there was no mention of this part in the 1956 manual which was in the Set.



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.

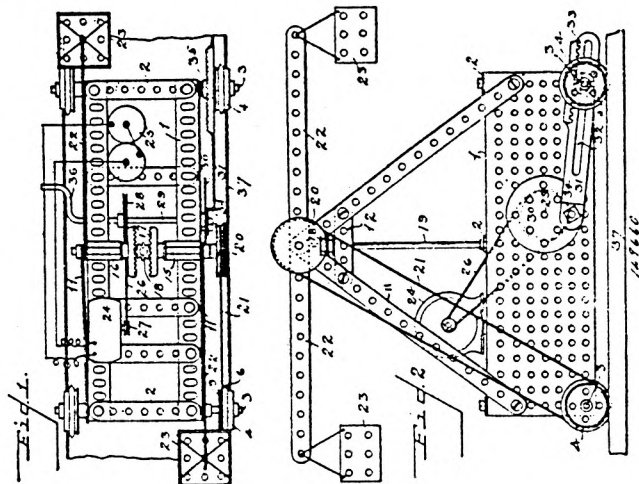
Still on parts Don sent a copy of a summary of a Canadian **AMB Patent** in the name of Frank A. Wagner; it is dated July 1913, and had been filed in October 1912. The illustration opposite is accompanied by 9 paragraphs of text which seem largely repetitive but cover the Oscillating Rack and Eccentric 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.

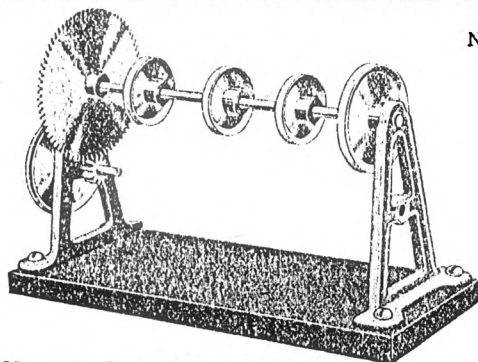
Next in chronological order is a copy of a complete manual from Richard Symonds. It has 'Copyright 1913' and 'Patented in Canada July 29, 1913' on the cover, and inside on p1 is 'Copyright 1914'. There is also mention on p2 of a competition with a closing date of April 1915. I think it would be fair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

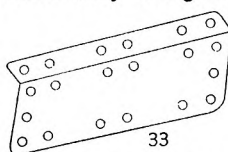
Ike's final part shows the later parts in many of the models including the ribbed Plates. There is also a reference in the instructions for a Zeppelin model, to 'the present European warfare', which probably means the manual was prepared before America entered WW1 - I'll call it '**early 1915**' because 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.



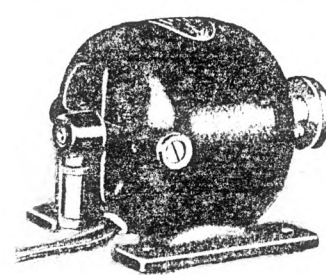
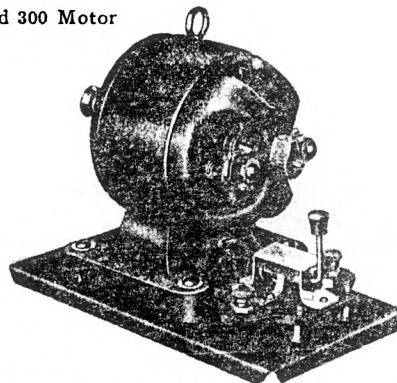
As in MCS/FB, the list of sets in this manual includes Special Outfits Nos. 11, 12 and 13, and it is stated that their contents are exactly the same as Nos.1, 2 and 3 except that a No.150 Motor is included in each set.

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

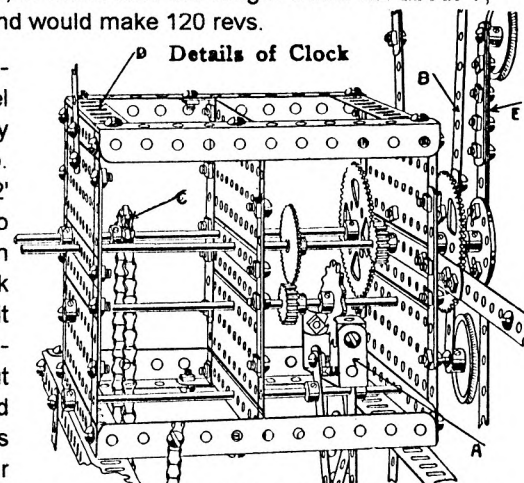


No. 325 Motor

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: SCOONER,60,17; PLATFORM DERRICK,72,23. 4: SWINGING BRIDGE,80,24; GAS ENGINE,92,32. 5: AERIAL SWING,100,25; LATHE,107, 38. 6: MERRY-GO-ROUND,120, 39; TRAVELING ROTARY CRANE "Panama Type",129,49. 7: LONDON TOWER BRIDGE,140,50; CYLINDER PRESS,151,68. #Other notes: The 26 letters of the alphabet are shown for Outfit No.1 on p3, and 8 examples of Mechanical Construction on pp72-76: the first is SIMPLE BRACING and the last, GEAR TRAIN.

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

details are given for the incomplete manuals referred to above.

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

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

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

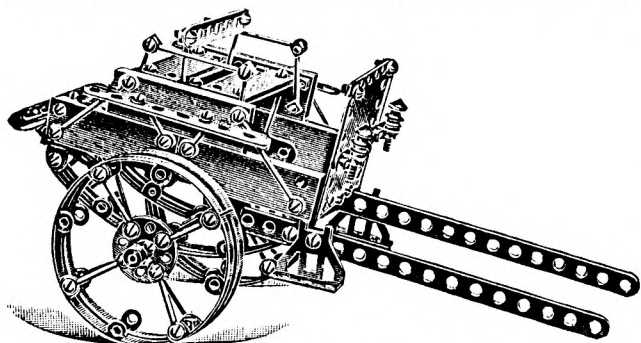
'late 1915' The title page has some fanciful floral artwork at each side and the slogan in the '1914,' 'Makes Mechanics Easy', has been replaced by 'Educational and Highly Entertaining'. The illustrations and list of parts on pp 78-79 are exactly as in MCS/FB except for the change to Part 33. Likewise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

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

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

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

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

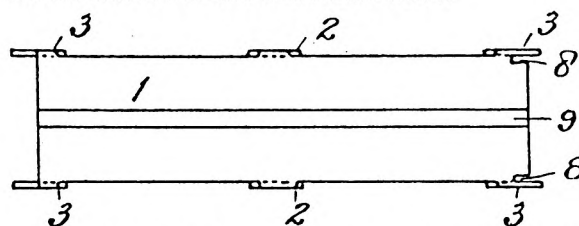


No. 1000. Dog Cart.

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

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

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



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

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

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.

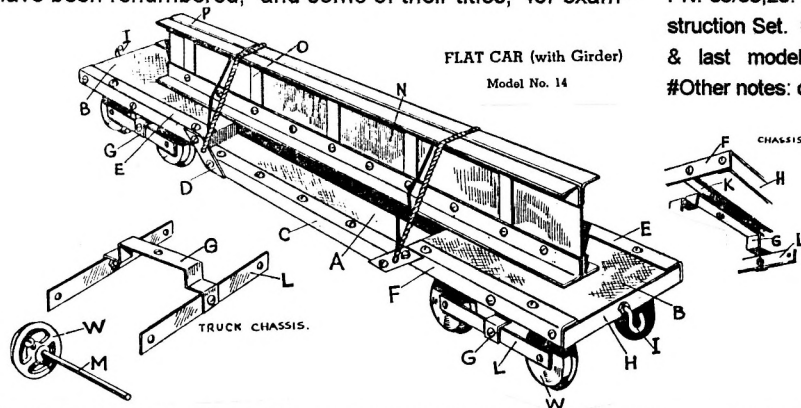
JUNEERO MADE IN CANADA Richard Symonds sent a copy of a JUNEERO 40 page Instruction Book which has along the bottom of its cover 'Manufactured by THE STEELMASTER COMPANY LIMITED, Vancouver, Canada'; and on the back cover the address is given: 950 S. W. Marine Drive, Vancouver, B. C. Inside there is a 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-



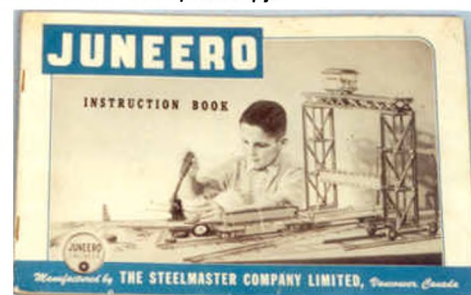
ple that of the model shown below, have been changed too. None of the models are road vehicles and Tires are not used in any of them.

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.



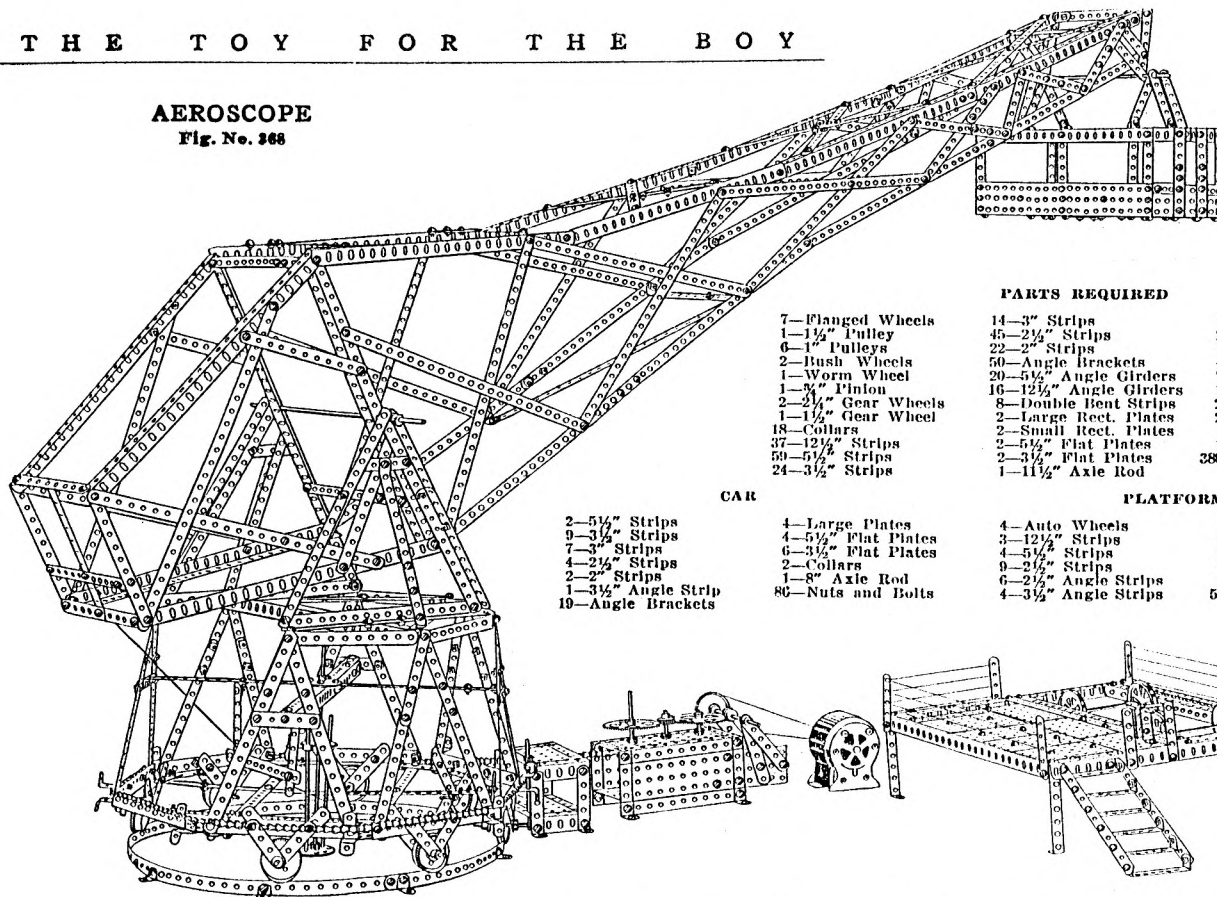
MYSTERY PART No.20 The 4x1½" Plate with one ½" flange (10/259). Don Redmond solved this one with a copy of a page from an AMB manual which showed the part: it replaced their Flanged Sector Plate in about 1915. More

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.

AEROSCOPE

Fig. No. 368



PARTS REQUIRED

7—Flanged Wheels
1—1½" Pulley
6—1" Pulleys
2—Rush Wheels
1—Worm Wheel
1—Pinion
2—2½" Gear Wheels
1—1½" Gear Wheel
18—Collars
37—12½" Strips
59—5½" Strips
24—3½" Strips

14—3" Strips
45—2½" Strips
22—2" Strips
50—Angle Brackets
20—5½" Angle Girders
16—12½" Angle Girders
8—Double Bent Strips
2—Large Rect. Plates
2—Small Rect. Plates
2—5½" Flat Plates
2—3½" Flat Plates
1—11½" Axle Rod

1—8" Axle Rod
2—5" Axle Rods
1—4½" Axle Rod
4—3½" Axle Rods
7—3" Axle Rods
1—6½" Crank
2—4" Chains
2—1" Sprockets
1—1½" Sprocket
1—No. 150 Motor
389—Nuts and Bolts

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

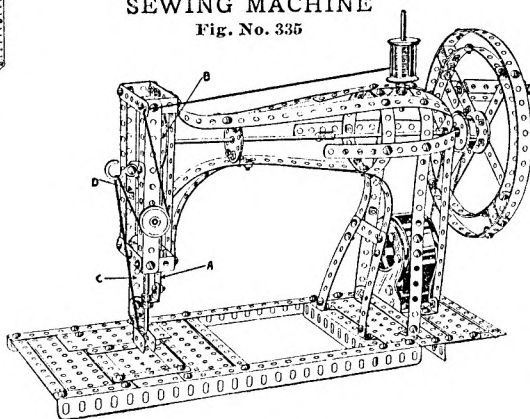
1—Single Bent Strip
6—12½" Angle Girders
4—Angle Brackets
7—Small Plates
2—6" Axle Rods
59—Nuts and Bolts

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 me-
chanism is shown on p279.

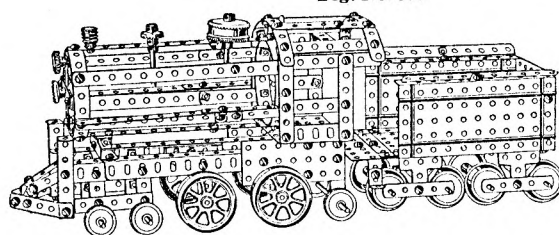
SEWING MACHINE

Fig. No. 335



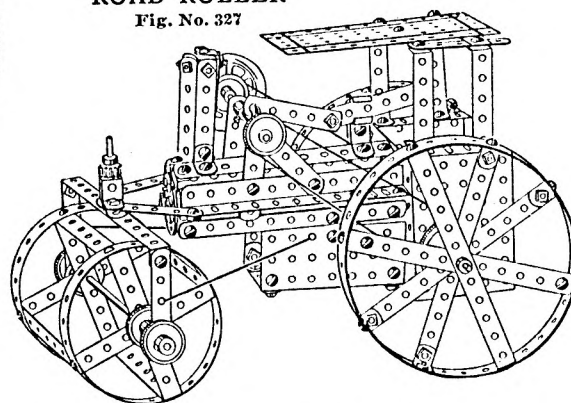
LOCOMOTIVE AND TENDER

Fig. No. 333



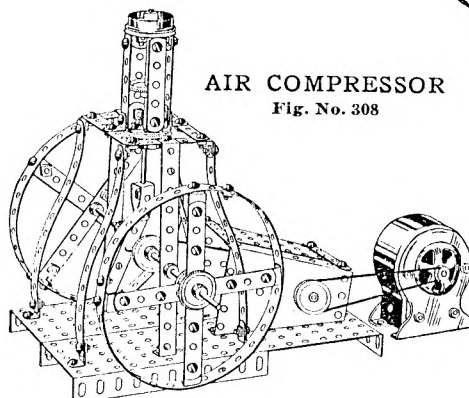
ROAD ROLLER

Fig. No. 327



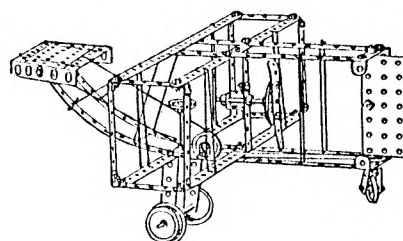
AIR COMPRESSOR

Fig. No. 308



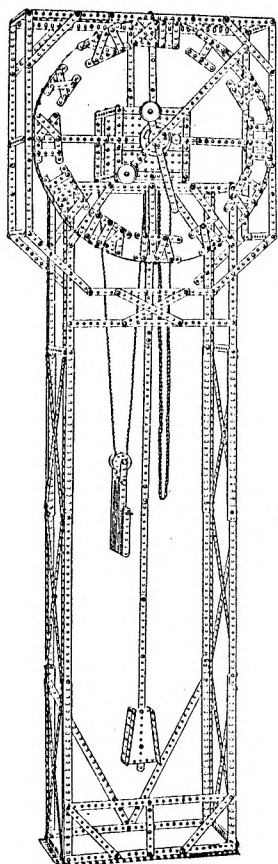
BIPLANE

Fig. No. 188



GRANDFATHER'S CLOCK

Fig. No. 369



AMERICAN MODEL BUILDER MANUALS/MOTORS

I misled myself over some of the dates of the manuals mentioned in OSN 11 by relying too much on the copyright dates on certain of them. Now thanks to Messrs. Bernal, Bisset, Drury, Redmond and Symonds, more has come to light on manuals, their dates and the motors advertised in them. Where available Summaries will be given but details which are the same as those in 11/280 won't be repeated. The correct dates for manuals given below are underlined to avoid confusion with those in OSN 11.

The '1912' of 11/278 should have been '1913': included in the complete manual are details of a competition closing in April, 1914. There are ads for the No.200 and 300 motors but not the 325; the No.350 Counter Shaft is also shown.

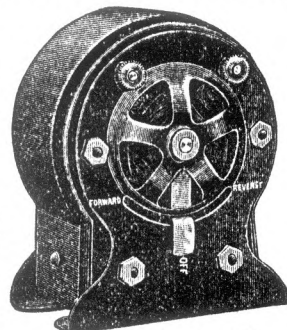
SUMMARY OF MANUAL •Dates: © 1913 on FC & p1; contest closing date, 4/14. •Page Nos. of Parts List & highest PN: 76,77,62. •Page No. of Set Contents: 79. •Sets covered: 1-7. •No. of models for each set: 20,10,11,13,9,7,10. •Name, Model No., Page No. of first & last model of each set: 1: Revolving Crane,1,3; Windmill,20,9. 2: Revolving See Saw,40,10; Endless Rope Railway,49,13. 3: Revolving Scoop,60,14; Lawn Swing,70,19. 4: Power Cable Railway,80,20; Auto Moving Van,92,30. 5: Rotary Traveling Crane,100,31; Suspension Bridge,108,39. 6: Bascule Bridge,120,40; R. R. Semaphore,126,50. 7: Eiffel Tower,140,51; Cylinder Press,149,68. •Other notes: no slogans on page bottoms. Constructions, Simple Bracing to Gear Train, are shown on pp70-75.

The incomplete Supplementary '1913' manual (11/278) probably came between the '1913' above and the main '1914' issue described below. From its ads it could have preceded the '1913' but as all the models in it are in the '1914', I'll call it the '1913/S'. This manual shows the AMB-style Pawl for the first time, as opposed to the MECCANO pattern.

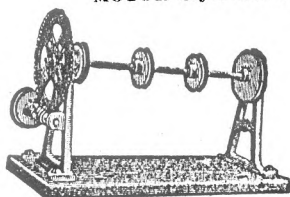
The main '1914' is the '1914' in OSN 11, but please note a mistake in its Summary - there should be 13 Set 4 models and not 3. This is the first manual in which Sets 0 and 0½ are mentioned although a reference to them in the missing pages of the '1913/S' is possible. In addition to the main manual, a 20-page one for Set 1 is also known from 1914.

A complete example of the 'early 1915' (11/279) is now available and it is another Supplementary edition 'to be used in connection with 1914 manual'. So it will be called '1914/S'. From the 4/16 competition closing date it was probably issued in 1915. The new 1915 parts, including the ribbed Flanged Plates, are shown for the first time in this manual.

The motors in it are Nos.100, 150 and 325. The 100 cost \$1 and runs from 1 or 2 dry cells or a transformer; it is 3 1/8" high with a 1 3/8" dia, 3-pole armature. The 150 (\$1.50), opposite is identical except that a Fwd/Off/Rev switch is built into its base. It was recommended that both should be used with the No.350 Countershaft, and this now has a first stage worm reduction using what appears to be a standard 2 1/4" Gear (#73). The 110v No.325 motor continues but the price has reduced to \$10.



MOTOR Style No. 150

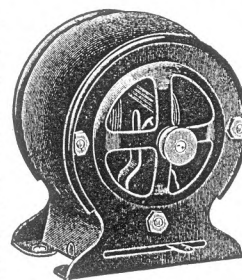


No. 350. Worm-Driven Countershaft

SUMMARY OF MANUAL •Name: Supplementary Book of Instructions. •Dates: to be used with 1914 manual; 4/16 comp. closing date. •No of pages: 48 inc covers. •Printing: FC black & red/orange on white paper; inside black line drawings. •Page Nos. of Parts List & highest PN: 42,43,79. •No Set Contents. •Sets covered: 1-7. •No of models for each set: 128,48,33,43,15,7,7. •Name, Model No., Page No. of first & last model of each set: 1: Ladder,46,3; Platform Derrick,173,11. 2: Deep Well Pump,174,12; Hulett Ore-Unloader,221,16. 3: Lamp, 239,17; Counter Scales,271,20. 4: Barge Dredge,272,21; Zeppelin, 314,27. 5: Punch Press,322,28; Battleship,336,31. 6: Electric Railway, 346,32; Stationary Engine,352,35. 7: Library Lamp,364,36; Old Dutch Windmill,370,41. •Other notes: ribbed Flanged Plates shown.

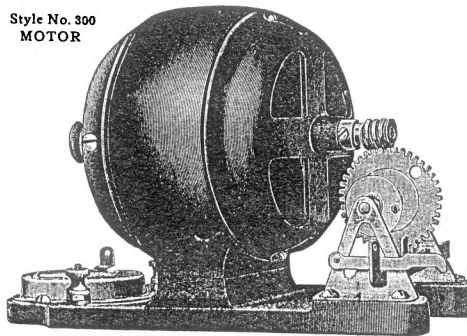
The main '1915' manual has the same motors as the '1914/S' and the same models as the '1916' (see below). Neither the '1915' nor the '1916' were mentioned in OSN 11.

The '1916' is dated from the competition closing date of 4/17 given in it. It is the first manual in which Outfits 11, 12 and 13 are mentioned. The motors advertised in it are the Nos. 150, 200, 225, 250, and 300. The 150 (opposite) now has a slightly different casing with 4 cooling vents on the end instead of 5, and the slot for the switch lever is straight rather than curved. It is said to be 3 1/8" high and 2 1/4" 'over shaft', to weigh 1lb and to be finished in black enamel.



Style No. 150 MOTOR

The 200/300 motors differ considerably from the ones shown in 11/279. The 200 and 225 look similar to the #300 shown below but the 200 doesn't have the worm reduction gearing at the end. It has a 3-pole laminated armature, a cast iron base, and a black enamel finish; it weighs 2lb, is 3 3/4" high and 3 1/4" over shaft. It can be run 'from 1 or 2 dry cells but operates best on 6v and can stand 12v'. The 225 'Two Speed Motor' is said to have a windlass on its output shaft and a lever for shifting gear, which I suppose means disengaging the worm wheel. It is claimed that it will lift 50lb.

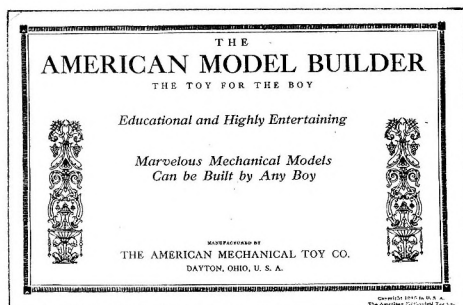


Style No. 300 MOTOR

The 250 is more powerful with a 6-pole rotor, like the earlier #300 perhaps. It is 4 1/4" high, 4" over shaft and weighs 3lb. Voltages are as for the 200 but it will 'stand 14v'. The 300 is the same motor but with the worm gearing, and will lift 75lb. Prices of this range run from \$2 for the 200 to \$3 for the 300.

SUMMARY OF MANUAL •Dates: © 1913 (FC); © 1914 & 1915 (p1); comp. closing date 4/17. •Printing: models are black line drawings on white paper. •Page Nos. of Parts List & highest PN: 78-79,79. •Page No. of Set Contents: 77. •No. of models for each set: 173,59,39,43,22,16,18. •Name, Model No., Page No. of first & last model of each set: 1: A (letter),no no.,3; Platform Derrick,173,18. 2: Deep Well Pump,174,19; Endless Rope Railway,232,25. 3: Revolving Wheel,233,26; Counter Scales,271,31. 4: Barge Dredge,272,32; Zeppelin,314,40. 5: Coal Elevator,315,41; Battleship,336,46. 6: Mountain Cable Railroad, 337,47; Stationary Engine,352,56. 7: Monorail,353, 57; Old Dutch Windmill,370,73. •Notes: patents: Canada 29/7/13; U.S. applied for.

Finally the manual noted as 'late 1915' in OSN 11, the one



with the Universal Plate replacing the Flanged Sector Plate in the Parts List/Set Contents. It can't be dated positively at present. From its models, the

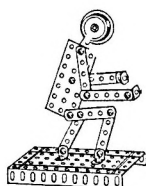
motors advertised in it (100, 150, 325), and the competition closing date of 4/16 it would appear to be the '1915', but of course the inclusion of the new version of PN 33 would put it after the '1916'. Don mentioned that the pages (77- 80) showing the new Parts, Contents and Outfits are replacements 'tipped onto the stubs of the original pages', and the cover (above) is different. No doubt the explanation is that old manuals were being used up and the competition date got overlooked. It doesn't of course establish the exact date and I'll call this manual '**1917+**'.

Since the above was written Kendrick Bisset and Josep Bernal have sent several interesting items. From the former details of two smaller manuals for the No.1 outfit, which from the competition closing dates in them are from 1914 and 1915. They are as might be expected in terms of models, ads, etc. The first, I'll call it '**1914/1**', has 20 pages plus covers and shows all the No.1 models that are in the main '1914' manual already described, plus a few from the larger sets on pages 12-15. The second, '**1915/1**', has 24 pages plus covers and has the 173 No.1 models from the '1915', plus some larger models on p19. The parts shown on p23 are said to be 'entirely new and are only included in the 1915 American Model Builder outfits.'

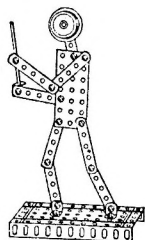
Kendrick also sent an AMB catalogue that was posted out in November 1913. It provides confirmation that the No.0 set hadn't been introduced at that time. The 200 and 300 motors are shown, and the Countershaft 350, also the No.400 Transformer which isn't listed in the '1913' manual. Some emphasis is placed on AMB being 'the only building set on the market that has brass collars attached to all the wheels', although MECCANO parts would probably have had tapped bosses by that time. To be pedantic, the AMB claim wasn't true anyway since their '1/2" Pulley Wheel' didn't have a boss.

Josep sent another Supplementary manual which probably dates from the second half of 1916. The winners of the 1916 contest are given and the next contest was to close in 4/17. So it's '**1916/S**', and the ads for motors and sets are as in the main 1916 manual. Of the 155 who won prizes in the competition, all had addresses in the U.S. except for one in Vancouver and one in Montevideo. The models are nothing special, except perhaps for some sporting figures,

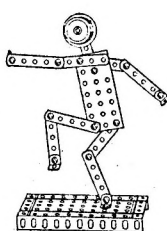
CATCHER



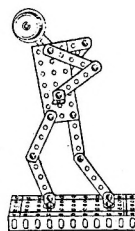
BATTER



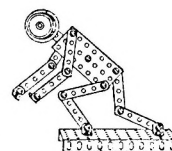
PITCHER



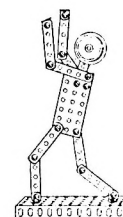
UMPIRE



SHORT STOP

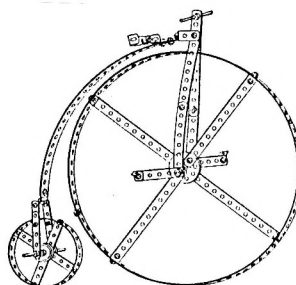


FIELDER

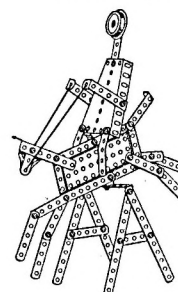


All Models shown on this page can be made with The American Model Builder Outfit No. 2 or No. 12, or with No. 1 and No. 1 1/2 Combined, or with No. 11 and No. 1 1/2 Combined.
HALF THE FUN IS BUILDING THE MODELS—THE OTHER HALF IS OPERATING THEM WHEN COMPLETED.

OLD-FASHIONED BICYCLE

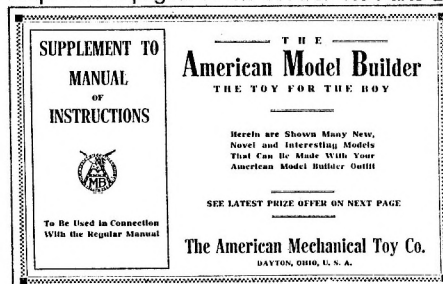


HURDLE JUMPER



including the 6 baseballers (if that's the right word) at the bottom of the page. I rather like the Hurdle Jumper and Penny-farthing above. Details of the manual follow:

SUMMARY OF MANUAL. •Dates: © 1915 on IFC; 1916 comp. winners given; next comp. closing date, 4/17. •Page size: 258*165mm deep. •No. of pages: 16 inc covers. •No Parts List/Set Contents. •Sets



covered: 1-6. •No. of models for each set: 17, 10, 11, 5, 3, 2. •Name, Page No. of first & last model for each set: 1: LOCOMOTIVE,3;

ANIMAL TRAP,4. 2: HURDLE JUMPER,5; FIELDER,5. 3: HEAD BALANCER, 6; FENCERS,7. 4: DOUBLE ACTING PUMP,8; ARMORED MOTOR CAR,8. 5: CLOCK,9; GRIST MILL,10. 6: GRAIN SEPARATOR, 11; ICE MACHINE,11. [no model Nos.] •Other notes: details from photocopy. Prize winners on p14, testimonials on p15.

And EL CONSTRUCTOR AMERICANO DE MODELOS MECÁNICOS Josep also sent copies of some pages from an AMB manual in Spanish which he suggests may have been for the South American market.

All the inside pages correspond to the '1913' American edition, including the List of Parts (1-62), Motors 200, 300, and #350 Counter Shaft. The



cover (above, x.25) is completely different though, and rather elegant with the name in gold on a pinky-beige ground, edged in yellow and black. In addition he sent some identical edging, but in red, that he noticed glued onto Ike Ascher's bound up manuals (see 11/278). They included a page from an early manual, so perhaps the design used for AMB covers before the '1913' (which had the father, son and Inclined Railway on it) was similar to the Spanish one.

bullet 30 yards.' He added, as if to appease parents, 'Fine for practicing in the garden.' However, the Gilbert Nurses Outfit was not available here - presumably British lads just had to be more resilient than their peers in the U.S.A.

David has also tracked down the French patent for **AJUSTO** (12/315): it turned out to be No.750927 and not the number on the Manual, which had nothing to do with toys. The date of application was 17 February 1933 and it was in the name of Robert Tassel, resident of Eure (to the east of Paris). Of the various clips shown in OSN 12, only types A and B are shown, but an alternative form of A is included (Fig. 3), and also clips to unite various sections other than semi-circular, rectangular for example (Fig.12). A method of joining solid rods is also given (Figs.15-17) - one rod is held in the clip l, which engages in the slot in the thin metal cap o, whose arms are bent down over the other rod and are held by the spring clip q.

And as a footnote, the TUPO ball and socket joints (12/307) reminded David of a 1927 patent No.302303, classified under 'constructional toys, figures'. The claim is 'A model of chocolate representing a human or animal figure comprising two or more parts resting one upon the other without positive engagement, the contacting surfaces being shaped so as to establish a ball and socket joint. The moulded parts may be hollow and weighted at the base by an extra thickness of chocolate.' In David's words, a very rare and short-life construction system.



4. Josep Bernal sent a copy of the cover of a 1921 **STABIL** Manual for Sets 49-52 in Spanish. It is basically the then normal STABIL standard with the righthand panel like the DEN LILLE INGENIØR one in 7/157 and on the left, „Stabil“ and the text details in Spanish.

5. John Hanby wrote that he had recently acquired a **JUNEERO Engineer's Set** (see 8/178, 9/216) and that it is almost certain that it was originally bought at Xmas 1940. The metal Discs in it were 2.50" and 1.75" dia, different to the postwar ones described in OSN 8, and those in my Engineers' Set were different again at 2.13" and 1.68". All were the same thickness.

6. Don Redmond has discovered that at least from 1936 to sometime in the 1960s, the major occupant of the address given for **THE ENGINEER** (12/328) was Armstrong Bros., machinists (Armstrong Bros. Engineering from about 1945 on). He also notes that the Screwdriver shown may have been a commercial, bought in item, and is similar to the **AMERICAN MODEL BUILDER** one, and to those supplied with White sewing machines ca.1919.

He also noted a new OS name, **AIMANTO**, Lot No.21 in a Jean Estève Objets list.

In a later letter Don wrote that in the *Canadian Encyclopedia* under *Toys*, it is said that the **Manual Construction Co.** and the **Reliance Toy Co.** both made steel construction sets. Reliance is one of the big firms in Canadian toys but so far no details about Manual are available. For **STRUCTOMODE** the same article gives the dates 1920-29 under Canadian Toys Ltd. [A Canadian Toys manual has a Price List dated 1918 in it. The maker shown in another manual is Structomode Ltd., again of Hamilton, and fewer

sets are listed, 00 to 3 against 0 to 6 plus 1M and 2M - the prices of corresponding sets are higher, \$6 for a #3 against \$4. The Little Hustler motor and the distinctive Braced Girders are no longer in the Parts List although the manual cover shows some of the latter but with **MECCANO** cutouts. The right-hand boy on the cover is wearing a jumper with a 'diced band' around the bottom, instead of that rather fancy jacket (see MCS). The Windmill Sail shown is also **MECCANO**-like with an arm, 6 bumps and rectangular holes, instead of the round holes in the Canadian Toys manual. Mainly because of the jumper I'm inclined to think that Structomode Ltd. came after Canadian Toys.]



7. Roger Baker bought a German set called **MECANIC** recently with parts that seem the same as those for the German **MEKANIK** in MCS. [In MCS Part 5 there's a Swedish **MECANIC** which is virtually the same as their **MEKANIK** - does anyone know anything of the change from 'Cs' to 'Ks' or vice-versa?]

8. Kendrick Bisset wrote that he has been told that the **MODELIT** Motor No.10 (12/327) was a Weeden product with the nameplate changed; also that he remembers seeing an ad for a motor similar to the one in the Loom (12/332), and it may have been a 'Little Hustler'.

On differences between similar parts from different systems he has found that the small hole for cord in old **MECCANO** Crank Handles is 1½" from the end, while **AMB** holes are 1½" from the bend.

9. Keith Cameron wonders at the number and variety of Other Systems, and the originality of some, but notes that the survivors, like **BRAL**, **TEMSEI** and **MÄRKLIN**, are all cousins of **MECCANO**, and share its greater adaptability and appeal.

He also comments on the difficulties of making sense of the various 'Groupes', Outfits and 'Albums' within **MULTIMOTEUR** (12/304), and hopes that someone who knows the system will kindly explain all. [Jeannot Buteux's comments above are a great help and perhaps later he will be able to give more details, for example the meaning of the titles of the different Groupes, and their scope.]

10. On **JUNIOR MECHANIC** (12/327), Al Sternagle wrote that he has a smaller #101 set in a 11½"×8¼" box, and thinks that it dates from the 1950s. As with the 201 there were no tools or manual with it, but 6 models are shown on the lid. The thread is 5-40 with the same length Bolts as in the 201, and the Nuts are 5/16" A/F and 1/16" thick. The thread on the end of the Crank Handle is 11/16" long.

11. Tony Matthewman, in reply to a question, said that **TRIX** Angle Girders were not introduced until after WW2, and that Continental ones were, and are, steel, and not aluminium as in the UK. He also mentioned that a German mail order house called *Quelle* has for several years sold 3 of the current **TRIX** sets under the name **QUELLE GOOD PLAY**, but 'TRIX' is also on the box lids in small letters.

CORRECTION On **Gilbert MECCANO**, several readers wrote to point out that the disc and vee of the 1" Pulley shown towards the bottom of 12/319 are formed, perhaps spun, from one piece and not two as shown. Also Kendrick Bisset added that the Pulley was at one time a standard **ERECTOR** part.

ITEMS FROM LETTERS

1. From Don Blakeborough: • Some notes on the New Zealand **LEDOM / MODEL ENGINEERING** systems. Three Sets have been examined, a No.0 and two No.2's. (Penciled on the No.0 box is 37/6d.)

The Axle Rods are 3.25mm dia and have deburred, sheared ends. The holes in the steel Clips that clamp the Rods are about 4mm dia (MECCANO Axles will not quite fit into them). There were no N&B in the Sets seen. The brass Adapters (Couplings) measure $\frac{3}{4} \times \frac{1}{4}$ " (double) and $1 \times \frac{1}{4}$ " (triple) and their holes are in the range 3.3 to 3.35mm; they are double tapped $\frac{5}{32}$ " BSW with roundheaded ($\frac{3}{16}$ " dia) brass Set Screws, $\frac{1}{4}$ " long u/h.

The 1" Pulley, $\frac{9}{16}$ " fixed and loose Pulleys, and $1\frac{3}{8}$ " Hub Wheel (8 hole Bush Wheel), are also all turned from solid brass; their bosses are 10mm dia, 7mm long, and are again double tapped with brass cheeseheaded ($\frac{3}{16}$ " dia) Set Screws, $\frac{3}{16}$ " long u/h.

The tinplate Road Wheels, pressed in two halves, are $1\frac{7}{8}$ " dia by $1\frac{1}{16}$ " wide, with 3.5mm centre holes. The Hook is made from 1.3mm brass wire with a small eye above the bottom $\frac{1}{2}$ " dia part circle.

- The following data to fill gaps in the OSN 6 List:
 - **CLOU** ('matchbox' set) - the hole pitch may be 8.3mm.
 - The diameter of **AMB** Axles is 3.95mm.
 - **MAC ET NICK**. Axle dia 4.15mm, and thread $\frac{1}{8}$ "BSW.
- On the **classification of parts**, "I have listed my MCS parts in a data base. The headings are (1) system; (2) material; (3) type; (4) from; (5) prefix; (6) No.; (7) suffix; (8) (Meccano) name; (9) space; (10) dia; (11) length; (12) width; (13) size; (14) thread; (15) holes; (16) colour; (17) notes/special features; (18) stock; (19) largest set; (20) odd features. I find it well suited for sorting the parts in any chosen order and for example, if I was looking for a green Perforated Strip with 13mm spacing and 4.0mm dia holes, I could sort by any or all of (16), (9), (15). However, I am not able to sort in, for example, the different types of Flanged Sector Plates. This may need to be set up in a second data base, with a third for Trunnions. Both of these parts can be found with different styles. The system I'm running is a 486, IBM compatible, 345mb HD, and I use a Works database. I started to run out of memory, so split the database into various data files depending on the spacing, for example."
- "I believe I have **HAO WANG** (8/182) parts Nos.1,2,9,10, plus a 5*3h Flanged Plate not listed in OSN. All these parts are light blue and have 4.5mm dia holes at 12.5mm pitch. The holes in the base of the Trunnion are slotted." [Don kindly sent over a Flat Trunnion and at first glance I would have taken it to be a WISDOM part, but it is actually slightly larger all round, $37\frac{1}{2}$ mm across against 36mm. The WISDOM Trunnion too has slotted holes in its base.]

2. From David Hobson: • **STABILA** (13/343) is the subject of UK Patent No.360314; it was granted to F.Walther of 60 Harzer Strasse, Berlin, and the date of the original German Patent was Feb 27, 1930.

- **UK Patents** (12/305) - it's worth adding that prior to the 1919 Patent Act the term of a UK patent was 14 years, thus Hornby's general patent of 1901 would have have expired on 8 Oct 1915. In 1915 the term of a patent in most European countries was 15 years, but 20 in Belgium and Spain; in Canada it was 18 years and in the U.S.A., 20.
- On **MULTIMOTEUR** (12/304,13/360), the inventor seems to have been Maurice Latour (mentioned in OSN 12), according to two UK patents in his name, 181020 (1922) and 411289 (1933). Convention dates are given (4 June 1921 and 6 June 1932) so there will be corresponding

original French patents. Both Patents are concerned with electrical machines to be used as toys or for demonstration purposes, which can be made using a limited number of standard parts. The approach seems to have been systematic and logical and for example, 13 different devices are listed in 411289 which can be constructed using 12 notches on the rotor and on the stator. These include dynamos, alternators, rotary converters, and various single phase and 2- and 3-phase motors.

- The **TRIX** connection with **X-ACTO** wasn't confined to the U.S.A. (see 12/331). In a 1957 *Hobbies Annual* there is an ad for **TRIX X-ACTO Hobby Knives and Tools** Hobby Knives and Tools, and readers were invited to send for illustrated leaflets from Trix Ltd., 11, Old Burlington Street, London, W.1.



- And some thoughts following Tony Matthewson's comment about UK **TRIX** A/Gs being aluminium (13/361). The Flanged Base Plate, E1, in my prewar Gears set is steel, and seems to be tinplated rather than having the zinc finish found on most steel parts; the postwar 'E' and 'G' Units I have contain both steel and aluminum versions of this part. Perhaps Tony would know if there was a specific point at which the change of material occurred, and if so when. In my unpainted **TRIX** parts there are 25 steel and 25 aluminium E1's. The later blue painted ones are all steel and like some of the other painted parts, seem to be nickel plated under the paint. Perhaps this gave more reliable paint adhesion than the usual finish.

Out of curiosity a check on my accumulation of several kilos of **TRIX** with a magnet (to the eye, some of the better zinc plated parts look identical to aluminium ones), gave 61 aluminium parts (1xF13 and 28xF9 Strips; 14xP29 Discs; 5xW10 and 13xW16 Washers). This represents only a very small proportion of the total but indicates that at some time, some parts were supplied in aluminium. Perhaps this was in the immediate post-WW2 years when there was a shortage of steel, and indeed, when the aluminium A/Gs were introduced.

- For the record, the UK Patent covering the **GILBERT NEW WHEEL TOY** (8/198) is 140101 with a Convention Date of 11 March 1919, but there is nothing in it that wouldn't have been expected. The note on **GILBERT RIDE-IT ERECTOR** (13/360), brought to mind a comment in the 1983 Heimberger House book *A.C. Gilbert's Heritage*. Under 'The Beginning of the End' on p139 he says, "Another 'new' idea for 1965 was 'Ride-em Erector' with gigantic parts to build any of the five toys that the boy could then get on and ride. This idea didn't work. A boy small enough to ride the toys was too small and too young to put it together. They should have checked the company archives. A.C. tried this idea prior to 1920 and it didn't work then either, and for the same reason." Presumably 'Ride-em Erector' was a slip of the pen. There's a similar comment on p23 in *Greenberg*, quoted in 9/219, about the '1919 Gilbert Outdoor Wheel Toy'.

- Still on **ERECTOR**, I noticed at a recent toy fair what appeared to be a new Greenberg reprint of a 1934 **ERECTOR 'How to Make 'Em' manual**. It had a price of \$10 printed on the cover and I wondered if in fact it is a recent publication.

- Some of the Slovenian **METALLICO** sets (see 13/336) were available before Xmas from Kittle Hobbies, 24 Pennard Road, Kittle, Swansea, SA3 3JS; tel: 01792 232508. The range of outfits that were in stock isn't sure but a No.4 was £37 and a No.10, £66. Early in January all the No.10's had been sold and it wasn't known when new

supplies would be available.

3. Al Sternagle wrote about the **GILBERT RIDE-IT** set too. He once made up all the models from a Set for his 5 year old son, and the biggest hit was the 'Kenworth' tractor complete with double exhaust stacks. His daughter's favourite was a Fire Engine. Conclusion - a much underrated toy for young children, though they might have difficulty building with it.

4. Clive Weston sent a copy of a page from his wife's magazine **Doll's House World**, which shows an ad for a $\frac{1}{12}$ scale **MECCANO Set**, 'price £19 (instructions included)'. You can see the name MECCANO on the lid but you can tell it isn't genuine, the Strips are red and the Plates green.

He also recounted a cautionary tale about the interesting looking 'mystery' part opposite ($\frac{1}{4}$ scale), that he once found in a mixed lot. Was it an architectural part? or a trunnion from a large axle system perhaps? Well no, all was revealed at an outdoor market where numerous examples could be seen on a rail with necklaces and chains hanging from them. Clive added, 'My wife was amazed by my sudden interest in jewellery stalls but quickly lost interest when I explained what had attracted my attention.'

5. Richard Symonds sent an ad showing the **Hook** which was loose in the **UMAKIT Set** (13/339), and it is listed as a **TONKA** replacement part.

6. Notes from Don Redmond. • **ERECTOR** and **AMB Worms**. The first phase ERECTOR Worm is steel, 21mm overall. It has a 3-turn length of thread (16 DP) and a rather long and slightly tapered boss with a small countersink to the bore at that end. The thread-end is flat. My AMB Worm is brass, 16mm long, with 4 turns of thread at 3mm pitch, and a round or bulbous end. The boss is very short (6mm long), and is fitted with a Grub Screw. It is 16mm long overall and is much shorter than it looks in the manual. (The reason the ERECTOR boss has to be so long is its round-head Set Screw) [A couple of first phase ERECTOR Worms to hand are as described above and are nickel plated. The pitch is about 5mm. Later 24 DP Worms are steel but brass plated, and the pitch is about $3\frac{1}{4}$ mm, much nearer the AMB. Again there are 3 turns of thread and the ends

shapes are similar. The boss is even longer (11mm), but with no taper. The overall length is 19mm.]

• Some orange-red heavy steel **Disc Wheels**, $13\frac{13}{16}$ " dia, with $\frac{1}{4}$ " axle bore, which came in a job lot, turned out to be **ERECTOR** part DM. It was listed from 1927 through 1932, and was included in the larger sets. The 'Duplex' parts of the period had alternate standard and $\frac{1}{4}$ " holes. DM Wheels are shown on p107 in *Greenberg* fitted with white Tires (#DR) which are actually rubber 'skins' that fit over the formed 'balloon' rim of the wheel. The brass bosses are on the outside face of the wheel and take an 8-32 setscrew. [The original DM was the 6-spoked Front Wheel shown on the Van in OSN 2, p28, and there was a different spoked Rear Wheel, DN, with a much larger hub. The Tires for them, DR, look as if they are of rectangular section, with one on the front, and two on the rear wheels. These three parts were only listed in 1926.]

• Some aluminium parts in a miscellaneous lot, including blue Wheels Discs and a Crank Handle. They correspond to **JUNIOR MECHANIC** (12/327, 13/361) except that the Strips and Angle Brackets have rounded ends. There were also some 6-32 N&B, but $\frac{1}{4}$ " and $\frac{1}{2}$ " in length.

7. Karst Quast sent the Jan. 1962 issue of a Dutch hobbies magazine called *Na Vijven* (After Five), and in it were featured 6 models from a **JUNEERO** competition that had been announced the previous September. One of them is a nice Lifting Bridge that looks about 3' high. There's also an ad from a company called *Uitgeverij Esks N.V.* of Utrecht which offered a JUNEERO Set at £17.50, material (by the kilo), and parts, including plastic gears.

The end date for JUNEERO isn't known but it was obviously alive in Holland in 1962, some 10 years on from the last ad in ME, noted in 9/216.

8. Kendrick Bisset mentioned a book on Richter Anchor Blocks that he enjoyed despite not being a Richter enthusiast. It describes the history of the company and the stone block sets, and covers the metal additions used with the blocks, as well as (briefly) the metal construction sets. It costs about \$60 and can be obtained from the author/publisher, George F. Hardy, 1670 Hawkwood Court, Charlottesville, VA 22901, U.S.A.

EXTRA MCS SHEETS The Sheets listed below are available at 15p per Sheet plus postage. That makes £2.70 + post for all 18 Sheets.

MCS Amendments, List No.3 [1 Sheet]

AJET: X1.1,7 [1 Sheet]

CLIP-CRAFT: X1.1,7 [1 Sheet]

CONSTRUCTION TRUCK: X1.1,2/4/5/6 [1 Sheet]

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

COOL STEEL: X1.1,7 [1 Sheet]

KITSPOCK: X1.1,7-b [2 Sheets]

MEC-BRAS: X1.1,2,4,5,6-a [3 Sheets]

METALCRAFT: X1.1,4 [1 Sheet]

STEEL TEC STARTERS: X1.1,2/4/6,4/6a-b,5 [3 Sheets]

TECHMASTER: X2.4a/5a/6 [1 Sheet]

ACCOUNTS Dear Subscriber,

Your remittance of _____ received with thanks.

Your credit balance after deduction for this Issue and

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

SUBSCRIPTION RATES For 1996 (OSN 14 and 15), including postage, at Printed Paper Rate where appropriate: UK £6; airmail to Europe and surface mail anywhere, £7; airmail outside Europe, £8. **BACK NUMBERS** For the zones above: OSN 1: £1/£1.30/£1.50; OSN 2,3: £2.30/£2.70/£2.90 each; OSN 4-13: £3.60/£4.10/£4.50 each.

SMALL ADS Up to about 150 words free for each subscriber in each Issue; above that by arrangement. Insertion guaranteed in OSN 15 if ads reach the Editor by the end of July, 1996.

PAYMENT Please make cheques etc payable to P.A.Knowles. Remittances in other than Pounds Sterling will be cashed locally and the resulting Sterling credited, but bank charges are often prohibitive.

• Overseas subscribers can pay by VISA, ACCESS or MASTER cards: please send Card No, Expiry Date and Name and Address of Card Holder. Debits appear under the name 'SIMPLY COMPUTERS'.

• Overseas subscribers need not send sums of less than £5 for Back Numbers, purchases from the Editor, etc, until it is time for subscription renewal.

Corrections • Jeannot Buteux has pointed out that for the second time (!) I got the name of MAYKO wrong, see MAKKO/MAYCO in 15/427. But I did get it right in 16/447. • In the 3rd para of 'A Russian Baby' (16/435), the '5*10h Flanged Plate' should read '5*11h Flanged Plate'. • At the top of the 2nd column of 15/420 the 'red or blue' colour of the painted ZICK-ZACK parts should read 'green or blue'.

ITEMS FROM LETTERS

1. From Don Redmond: • John's Photo & Hobby, 2188 Danforth Ave., Toronto, Ontario, M4C 1K3, tel/fax: 416-421-1850/7441, stocks **TEMSI** sets and parts. • Parts which may be **CASTLE BUILDER** have a hole pitch of 12.77mm±. • In a large lot of **AMERICAN MODEL BUILDER** parts there were two types of N&B: the normal ones, plus 3mm thick, 3/8" square Nuts, and Bolts with 7mm Ø heads, both brass. And AMB Sprocket Chain has 13 links in 4". • The lower **STERLING** Screwdriver in 16/430 looks like the bought-in commercial item that is found with post-WW1 White sewing machines, and in other sets as well, including **AMERICAN MODEL BUILDER**. • A **BRAL 400** Set has deceptive packaging: it is in a carton 18*14*2" but the indentations for the parts are contained within 12¾*9*1½", so 34% of the volume of the carton. [I hadn't any record of a BRAL 400 Set and Don has now sent me more details. It's a small outfit from the current 'BRES' period, but before 1994, and it's based on 4 1" Pulleys/Tyres and a 5*11h Flanged Plate. I'll include more about it in a later Issue.]

2. From Jeannot Buteux: • From 15/413, there is also a Danish **EIFFEL** which is compatible with **MECCANO** and the parts are marked **EIFFEL**. [Could this be the **EIFFEL** mentioned in 16/458?] • The French **ASSEMBLO** patent (see 15/420) was No.720276 and was granted on 3 Dec. 1931. • **FALCO** [1] (15/426) was a **MECCANO**-type system with very colourful parts. • On **RODOPI** (see 16/458), it is confirmed that Bratsighovo is in Bulgaria.

Some new names: • **ARMA**, Czechoslovakian from 1955. • **CONSTRUCTAM**, French, perhaps from the 1950s. • **E.B.S.**, new theme sets from The Czech Republic introduced in 1996, with large, heavy, steel parts, nickel plated. • **LA CONSTRUCTION MÉTALLIQUE**, a French architectural system with 60 different Flanged

Plates as the main parts, each of which was available chromed, or painted in 10 different colours. • French **MA TOUR CONSTRUIT**, from the 1930s, with light steel parts. • French **TECHNIC**, 1939, with nickel plated steel parts but wooden Wheels.

3. In some French **TRIX** literature that Jean Estève kindly lent me the **BTB PENDULE ÉLECTRIQUE** (see 15/427) is included in a 1935 catalogue, price fr.59, and isn't among the new lines for that year, but it isn't in a list and brochure from 1938.

4. On **PREMIER** (16/457), David Fellows wrote that his brother received a set at Xmas 1955, and he remembers the Flanged Plates which were of a heavier gauge than contemporary **MECCANO**, and were finished in mid-blue semi-gloss enamel, similar to the current French colour.

5. From Keith Cameron on the **STABIL** article in OSN 14. 'Those Inventor's Outfits are extraordinarily advanced for their day, including the very early attempt to introduce heavy axles. But like so many innovations, these **STABIL** items have passed into oblivion almost unnoticed, perhaps due to failure to correct imperfections in the original design. I still think that the single metal teeth assembled in a metal strip around a hub was a brilliant idea - surely something should have come from it.'

6. From Kendrick Bisset. The **STRUCTO** Bridge (16/459) was the result of a marketing agreement between Structo, of Freeport, Illinois, and American Flyer of Chicago (before Gilbert bought the firm), which was formalized in 1922. AF advertised Structo non-constructional vehicles (trucks, autos) with AF trains, and acted as Structo's distributor. The 'constructional' Bridge is shown as an accessory in a (reproduction) 1918/19 AF catalog, and this would have been before Structo ceased producing their standard constructional outfits (see 15/424).

7. From Josep Bernal on a point about the production of **MECCANO** in Spain by Exin around 1970. Their last address (now closed) was Exin-Lines Bros. S.A., Roger de Flor 86, Barcelona 13. Later production was transferred to Mexico using the same machinery. The thread used for both the Spanish and Mexican parts was M4.

EXTRA MCS SHEETS The Sheets listed here are available at 15p per Sheet plus postage. That makes £7.95 for all 53 Sheets.

MCS Amendments, List No.5 [1]

ANCHOR: X1.2,5a,5b [2]

ARTS ET MÉTIERS Série 3: X1.1,2,3/4/6 [2]

BERGLAND: X1.1,2/5 [1]

BURGER: X1.1,2 [1]

CONSTRUCTION JEEP [2]: X1.2/5,2a/5a,4 [2]

DITMAR: X1.1,2/5 [1]

DORANDO: X1.1 [1]

FANTASIE "R": X1.1,2 [1]

FERROX: X1.2/5 [1]

FIX: X1.1,2,4/5 [2]

FRYDAGH: X1.1,2/5 [1]

GLOBUS Der Kleine Ingenieur: X1.1,2/5 [1]

GLOBUS LEICHTBAU: X1.1,2 [1]

KONSTRUX: X1.1,2,5 [2]

MAC et NICK: X1.3/4a-3c/4d,5-a [3]

MAFELL: X1.1,5 [1]

MÄRKLIN: X1.2,3,4/6,4a/7c [2]

MECHANIC: X1.1,2,5 [2]

MECHANISKAIS KONSTRUKTORS 'SKOLENS':

X1.1,2,5,3/4,3a/4a/6-3c/4c/6b/4d [4]

METEOR (M): X1.1,2,3/6,5 [2]

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

MKA: X1.1,2/5 [1]

MÖWE: X1.1,5/7 [1]

MWK: X1.1,5 [1]

PHANTASIE: X1.2/4,5 [1]

PLASTICON: X1.2 [1]

SACHSENMEISTER: X1.1 [1]

SPEDICON: X1.1,2/3,4,5 [2]

STEEL TEC: X2.2a/5b,4a-c,5a [3]

TRIANGLE: X1.1,5 [1]

TRI-SECTOR: X1.1,7-7b [2]

TUBA: X1.7 [1]

ZICK-ZACK: X1.1,2,5 [2]

ACCOUNTS Dear Subscriber,

Your remittance of _____ received with thanks.

Your credit balance after deduction for this Issue and

is _____

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

SUBSCRIPTION RATES For 1998 (OSN 18 and 19), including postage, at Printed Paper Rate where appropriate: UK £6; airmail to Europe and surface mail anywhere, £7; airmail outside Europe, £8. **BACK NUMBERS** For the zones above: OSN 1: £1/£1.30/£1.50; OSN 2,3: £2.30/£2.70/£2.90 each; OSN 4 onwards: £3.60/£4.10/£4.50 each.

SMALL ADS Up to about 150 words free for each subscriber in each Issue; above that by arrangement. Insertion guaranteed in OSN 18 if ads reach the Editor by the end of January 1998.

PAYMENT Please make cheques etc payable to P.A.Knowles. Remittances in other than Pounds Sterling will be cashed locally and the resulting Sterling credited, but bank charges are usually prohibitive. But U.S. Dollar bills are acceptable at an exchange rate of £1=\$1.60. Overseas subscribers need not send sums of less than £5 for Back Numbers, purchases from the Editor, etc, until it is time for subscription renewal.

earlier; the Coupling can be seen in the Sewing Machine; and the Navvy is one of the larger models. The insets show from the top: the end of the Motor, 2 Small Gears & the Worm; the Clamping Plate; a Small Gear on the Motor, driving a Large Gear; Small & Large Gears, and a pair of Bevels; and another pair of Bevels. Notice the slots in the Flanged Disk used in the Sewing Machine - these can be seen in several of the models in the Manual but the illustration in the Parts List, and the parts in Richard's Set, see below, have the normal round holes.

Both David's Piccolo and Richard's Spezial sets are from this period and have similar lids; the Piccolo manual is missing but the Spezial has the Radar manual already described. The boxes are still red but all the top of the lid is printed in colour with a boy & girl behind the Navvy shown on the last page, with real bucket excavators in the background. There's a product code in one corner: GHG Nr. 6510/3/4 // VEP MDN 34.80 on the Spezial. So 1980? No, because on the Piccolo: Artikel Nr. 6310/3/2 // VEP M 9.40. Again there's no logo and the old slogan is on both. The Piccolo box measures 12*10*1" and the parts are in a white moulded plastic tray. Both sets have plain aluminium parts but a similar Spezial set in EZ, with the same product code, has some coloured parts, as explained in OSN 15.

The PARTS What follows is based on the parts in the Piccolo and Spezial sets, both incomplete. **DATA** (in mm). **STRIP** (10-hole): •hole pitch/dia, 10.0/4.2 (but some holes in other parts 5.4); •width, 10.0; thickness, .83; •ends fully radiused, but with only about 1¼mm of metal outside the end holes. **BOSS**: •o/d, 10.0; •i/d, 4.10; •aluminium; •single-tapped M3. **AXLE DIA**: 4.00. **Mod**: 1.5 estimated. **NUT**: hex 7.0 A/F; **BOLT**: roundhead 6.9 Ø (mean); both

plain steel. **THREAD**: M4.

- The corners of all parts, other than Strips, and Brackets made from Strips, are square.
- None of the Strips (2,3,4,5,7,9,10,14,18h) have any large holes. The 14 & 18h ones are thicker at about 1mm, and the ends of most sizes are semi-radiused (r=6mm).
- The following holes in the Brackets are large: all in the Angle Bracket, the Reversed Angle Bracket, & the 1*2*1h DAS. The 3 centre holes in the 2*1*2h Double Bracket, and the holes in the lugs & the outer holes of the base of the 1*5*1h DAS. The holes in the 2*3*2h DAS, the Double Bent Strip, and the base of the Trunnion haven't been seen.
- All the holes in the A/Gs are large.
- The only large holes in the Plates and Double Strips are in the flanges of both Flanged Plates.
- The Gears have 18 & 35 teeth, and appear to mesh at 40mm centres.
- The 30mm Pulleys have a very sharp corner between the face and the 'V'; the Tyres for them are 45mm o.d. when fitted, and have SWL 29X8 moulded into one side. The small Loose Pulley is 10mm o.d.
- Collars are similar to the bosses, and are 8mm long.
- The shaft of the Crank Handle is 90mm long. As already mentioned the shorter smooth Axle is 70mm long. All Axles, including the Screwed Rods, are steel.
- The Bolts in the Spezial have bigger, 8mm Ø, fillister heads.

VEB (K) METALLWAREN SCHMERBACH This is the manufacturer given in EZ for the period after 1971, but I've nothing relating to it at all, and Schmerbach, if it's a town, isn't in my gazetteer.

Further Notes on AMERICAN MODEL BUILDER

Don Redmond & Richard Symonds have very kindly sent samples of a number of AMB parts, & following on from the notes in 9/218, 11/278 & 14/395, the points of interest are:

- The **½" Pinion** has 14 teeth and is all brass (not nick-eled), but with a separate boss rivetted on, though the peening is almost flush with the face. The boss $\frac{5}{16}$ "Ø by $\frac{5}{32}$ " long, and is fitted with a **Grub Screw** about $\frac{1}{8}$ " long, with a concave end. The **¾"**, with 20 teeth, is similar but the boss is $\frac{3}{8}$ "Ø by $\frac{3}{16}$ " long, and the Grub Screw is $\frac{5}{32}$ " long. The **¾" Crown Gear** has 20 teeth.
- **Bosses** on other parts are also short, $\frac{3}{16}$ " or up to $\frac{1}{64}$ " longer, with little peening showing. The **Set Screws** seen have either cheeseheads, $\frac{5}{32}$ "Ø; or roundheads, $\frac{3}{16}$ "Ø. Some with slightly larger roundheads may be ERECTOR.
- The **A/Gs** are quite similar to MECCANO but one or both of the arms of each of the 4 to hand are slightly wider. The MECCANO Flat Girder is $1\frac{1}{16}$ " wide and a hypothetical AMB one would be $\frac{1}{8}$ ". Also the distance from the edge to the start of the slotted hole is about $\frac{5}{32}$ " on the AMB parts and less than $\frac{1}{8}$ " on typical MECCANO ones.
- The **½" Pulley** is $\frac{1}{8}$ " wide and the 'V' is rounded at the bottom. The **Flanged Wheel**, #4, has a pulley groove and an 'internal' boss which is longer than the tread (the part that bears on the rail, is tread the right word?) by about $\frac{3}{32}$ ", but nevertheless its Set Screw is angled slightly outwards. It is listed as $1\frac{1}{2}$ "Ø but the pulley is $1\frac{3}{8}$ " o.d. and the tread $1\frac{1}{4}$ ". The **Car (flanged) Wheel**, #65, also has the boss on the inside, again longer than the tread, and the Set Screw angled. The tread is $1\frac{1}{4}$ "Ø too and the o.d. of the flange proper is $1\frac{1}{8}$ ".
- The **Angle Bracket** has a 9mm slot in one arm and often very little metal outside the hole(s) in one or both arms. #42, the **Spanner and Screw Driver** is stamped AMERICAN MODEL BUILDER.

Kendrick Bisset has also been good enough to send some notes on the parts he found in a 1914 #6 (1914 because it's in a cardboard box), and a #6½ in a wooden box with the 'new' parts in it, probably from 1915.

Later **Axles** had rounded ends, as described in the List of Parts in MCS/FB, but not those from 1914; similarly some have a transverse hole. The 1" was not listed after 1914.

The **Pulley Belt**, #45, is made up from a $5\frac{1}{2}$ " length of Spring Cord, .094" o.d., very similar to the MECCANO pattern but wound 'left-handed' so that a right hand screw can be screwed into the MECCANO part but not the AMB version. One end is tapered to screw into the other open end, forming a ring of about $1\frac{11}{16}$ "Ø.

The **Sprocket Chain** has $3\frac{1}{2}$ links per inch, and is made from .031" wire.

Don also sent some notes on manuals. The covers most often found are multicolour with a man, boy and Funicular Railway, similar to the one shown in MCS. But a manual belonging to John Wapshott is totally different with a matt grey cover printed mainly in black with buff highlights. There's still a man and a boy (with high button boots) but the model is a very simple Crane on Rails. On the cover is PATENT APPLIED FOR, and on the reverse is a 1912 copyright date. The illustrations of the models are fine-screen shaded drawings rather than the line drawings of later manuals, and at the top of each righthand page is MAKES MECHANICS EASY. The contents go from the usual simple Trucks on p2, to Fig.57, Wright Aeroplane, p44, and Fig.58, Ferris Wheel, on p46, followed by mechanisms, structures, and Parts List on pp48-56. Following on from 13/340 it seems very likely that this is a (or the) '**1912**' manual.

The Patterned Wallpaper/Kling Cover The cover in MCS has a yellow background with a red pattern on the wallpaper. In small print under the chair and model are The Kling Litho Co, Dayton, Ohio, and Copyright 1913; and at the bottom PATENT APPLIED FOR. This cover has been seen on the '**1913**' manual, and a very similar one on the '**1914**'. At the bottom in the latter case is PATENTED IN CANADA JULY 29, 1913, U.S. PATENT APPLIED FOR; and MADE IN U.S.A. is below the red outer frame.

The Striped Wallpaper/Artcraft Cover This variation has a light green background and wallpaper with buff vertical stripes on the light green, and no pattern. In the centre is ARTCRAFT LITHO CO, DETROIT, & the same 1913 copyright. The bottom wording is exactly as the '**1914**' above. Models start with the Alphabet on p3, and finish with Fig.369, Grandfather's Clock on p72, & Fig.370, Dutch Windmill, on p73. Mechanisms and the Parts List are on pp74-80. These details fit either the '**1915**' or '**1916**' manuals of OSN 13.

Corrections Under KONSTRUKTOR-MEKHANIK in 21/618, '18/566' in the 2nd line should be '18/499'.

ITEMS FROM LETTERS

1. From Werner Sticht. A complete list of all the **Walther** (of STABIL, etc. fame) **patents & DRGMs**, from 1898 through 1933, that he has compiled. In fact he was able to search to 1943 but there weren't any after 1933. Some of the points of interest: • Walther's first metal system was the **INGENIEUR** sets (see 7/164, 19/550), and a DRGM application (#253288) for the **Bifurcated Clips** that were used to fasten the parts together was made on June 16th 1904. On the same date application was made for the 5 DRGMs quoted in 13/348 but their numbers are 248034 to 248038, and not 249934-38 as given in OSN 13. • The DRGM application, #289896, for the wooden **RECORD** parts, (mentioned in 13/348) was made in July 1906. • DRGM 473572, for the use of **Threaded Rods** as axles or connecting rods in a constructional toy with Strips & A/Gs having equi-spaced holes, was made in June 1911. STABIL, which used such Threaded Rods, with Wheels, etc held on them by Nuts, had been launched some time before that, and they were used in the earlier INGENIEUR, so it is surmised that something must have alerted Walther to the need to protect his use of them. Had he become aware of MECCANO, with its less satisfactory tongued Clip method of fixing Wheels to Rods that was still being used in 1911? • March 1913 saw the application for DRGM 548483, subject a **Flanged Plate** with the centre punched out. This suggests that the transition from Period 1a to 1b (see 19/548) was in 1913.

• The date of **introduction of STABIL** is further confused by a wholesaler's catalogue, believed to be from 1911, (courtesy Tobias Mey, via Thomas Morzinck) for the 'Neu! Ingenieur-Bauspiel STABIL' with metal parts. What was new if STABIL had already been on sale for some years isn't clear - new to the wholesaler perhaps. At any rate 5 sets were advertised, with no set numbers, only the sizes of the boxes. The smallest was cardboard, and the others wood, with the largest measuring 46*29*4½cm. Also listed are 2 sets (Stabil - Spezialspiele) to build Railway Wagons. From the details given it is likely that the range was Sets 49 to 53, plus the Railway Sets 60 & 61 (Railway Sets 59-63, from 1914, were mentioned in 13/348).

• On the date of **MINIATUR** (see 17/468), it was not in a dealers' catalogue printed for the toy fair in the Spring of 1914, but it was very probably introduced before Xmas of that year, under the name STABIL MINIATUR. Thomas Morzinck has seen a box and a manual belonging to Tobias Mey, both with this name on them, and though the contents of the Set are as later, the Manual has fewer models for both Sets 20 & 21, than the © 1915 one. It is supposed that the name was changed because customers thought that, particularly because of its low price, STABIL MINIATUR meant a small STABIL set, and then found that they had bought a different system with parts that were not compatible with STABIL.

A pointer to when MINIATUR was being developed is that the DRGM for the Flanged Sector Plate was applied for on May 14th 1914. This part was not introduced into STABIL proper until 1921.

Probably production of MINIATUR ceased in the 1920s but it may have resumed in the mid-1930s. It was advertised in a 1936 brochure, possibly as a reaction to Märklin's MARBI (see 10/246). No changes were ever made to the models in the 1915 version of the manual.

2. From David Hobson. • A reply from **Trix** to an enquiry last October said that their constructional set programme had ceased but that some parts were still available.

3. Clive Weston wrote that he had obtained a copy of **Baukästen** (see 21/601) from www.Amazon.de at a total cost of about £21.

4. Kendrick Bisset wrote that he now has another **TECHNICAL TRAINER** set (see 19/528), and the label on the lid has 'F. A. M.' instead of 'TUCKER TOYS' in the white 'T' (see 10/264) with a small 'CO' underneath instead of 'INC'. And the address on the lower edge of the label is for Farmingdale Aircraftsmen instead of Tucker Toys. The corners & top edges of the FAM box are rounded, but otherwise it is similar in construction to the TUCKER one.

5. From Peter Kessler. Apart from the La Manche Set (see 21/595) **Märklin** have 10 other '**specials**' currently listed. Most are railway items but of possible interest are a 60cm long metal Zeppelin from the 1930s (#11400), and a Fire Engine with Tender (#19035). [The Zep is probably non-constructional; the Fire Engine looks like a long van with a ladder on its roof, and is said to be 'auf Basis des Auto-Baukastens'.] Peter said that delivery of these items was uncertain, and that he hadn't yet been able to order any of the cheap parts mentioned in 21/595.

6. An interesting **MECCANO X** item from Tony Press, copies of the front & back of a Liverpool X2 Model Leaflet, 13/1037/5, with the text in both English & French. On the front the top panel is the same as the LIF one in 16/446, and the text (English in the LH column, French in the right) is the same as that of a 1932 'X' one. The back shows 6 'Super Models' as on the 1932 'X' Leaflet except that the 2 additional centre models of the latter are omitted to make room for the Lists of 'X' parts in the 2 languages. [Despite Tony sending it from Australia, I suppose this Leaflet might have been for the Canadian market.]

7. Ron Michalowski wrote that the 6 page **ERECTOR Booklet** described in 21/593, did bear the reference M 973.

8. Jacques Pitrat sent a picture from ebay of a 'new' system, **PERFECTOR**.

The models above the name on the manual cover (right) are a Loco, a Lorry, a Marine Engine, and a Railway Signal, but nothing can be seen of the individual parts. The box



has a similar label on the lid. It was described as being German but *Baukästen* says that it was Austrian, made in Vienna by Kappl & Trubrig in 1948. How long it lasted isn't stated but the firm stopped making toys in the 1950s. No other details are given. [Since the above was written Kendrick Bisset has sent more details which will be included in OSN 22.]

9. From Don Redmond. • A brass Flanged & Grooved Wheel with a tread almost conical, and a very smooth curve from flange to tread, is believed to be early **AMERICAN MODEL BUILDER**. Can anyone confirm?

• After removing the nickel MECCANO & AMB parts from a **STRUCTOMODE** No.3 box, the remainder are believed to be original, and include the following. ½ & ¾" tinplate Pulleys without Boss, the ¾" with 4 peened over tabs in the centre hole, the ½" with 3. Strips erratic in their punching and in the form of the ends, with punching burrs on almost every hole. One of 4 Windmill Sail with the holes too close to the outer end. Double Brackets of heavy strip and noticeable higher than MECCANO. A bright nickel 5*11h Flanged Plate, out of square in both sheet & hole punching, with the flange holes on one side distinctly above the midline of the flange, (as in the MCS illustration). 2 bright, and one dull nickel Flanged Sector Plates, with 'slanted' or irregularly punched flange holes. However there is a possibility that the bright Flanged Plates are from a different set/system. These parts are of a much poorer standard than some other parts known to be STRUCTOMODE.

AMERICAN MODEL BUILDER

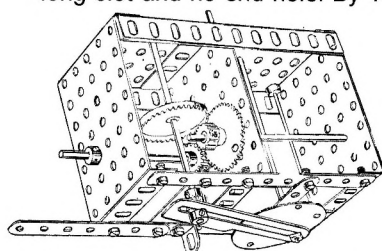
A 1912 Manual The underlining of the dates of reference manuals for particular years, started in 13/340, and used in 18/504, will be continued here. Thanks to David Lawrence a complete photocopy, apart from the missing pp1-2, of a **1912** manual is now to hand. It matches the one described in 18/504 although the background colour of the cover looks a pale green and the details are orange. Details follow, except when identical to 11/280.

SUMMARY OF MANUAL •Dates &/or Ref Nos: ©1912 on IFC. •Page size: 256*176mm deep. •No. of pages: 56+covers. •Printing: Finely shaded line drgs of models, cover (top right) black & orange on pale green. •Page No. of Ill. Parts List & highest PN: 55,55. •Page Nos. of Set Contents 56 (no PNs). •Sets covered: 1-7. •No. of models for each set: 16,10,7,9,6,4,6. •Name, Model No., Page No. of first & last model of each set: 1: ? [pp1-2 missing, 1st on p3 is TEETER Fig. No. 5]; WINDMILL,16,5. 2: ENDLESS ROPE RAILWAY,17,6; REVOLVING SEE SAW,26,10. 3: MOTOR DUMPING TRUCK,27,11; RAILWAY SIGNAL BRIDGE,33,16. 4: POWER CABLE RAILWAY,34,17; RAILROAD CROSSING GATES,42,25. 5: SUSPENDED RAILROAD BRIDGE,43,26; SUSPENSION BRIDGE,48,31. 6: CABLE SPAN,49,32-33; TRAVELING HOIST,52,36. 7: EIFFEL TOWER,53,37; FERRIS WHEEL,58,46-47. •Other notes: •Details from photocopy. •Model Nos. preceded by 'Fig.'. •Also HSMD-type models, Figs.59-66, on pp48-52, from SWINGING GATE TO GEAR TRAIN. •A Motor is shown on p54, & a List of outfits on the IBC.

The cover, top centre, differs considerably from later ones, and one of the latter (1913) is shown below it. A later version still is very similar to the 1913 except that the red design on the wallpaper is replaced by wide, vertical, brownish stripes. As mentioned in OSN 18, the red pattern type has 'Kling Litho Co., Dayton, Ohio' in very small print under the chair, while the striped one has 'Artcraft Litho Co., Detroit' further to the left, next to the border.

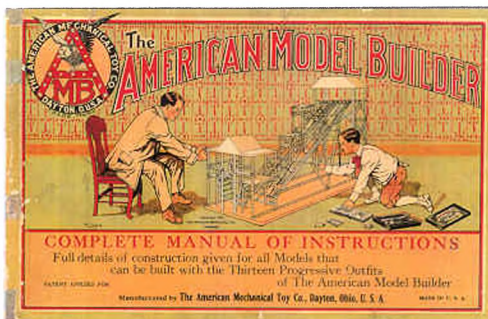
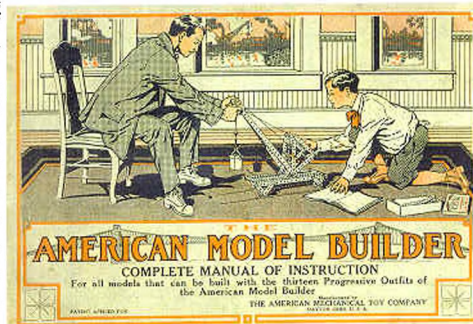
As is well known most of the 1912 models bear a striking resemblance to those in MECCANO manuals of the day, and the same format was used in presenting them. The similarities were sufficient for Hornby to successfully claim breach of copyright, although all the models had all been redrawn and some changes made. The most obvious is the replacement of the Key fixed bosses by the AMB tapped type; another is the use of the Oscillating Rack/Eccentric Wheel in a few models. This does provide a simple way of obtaining an automatic to & fro motion, as in the Flip-Flap in MCS, although in that case, as pointed out in 3/43, the load on the Pinion undesirably high. Incidentally the Rack in the

Illustrated Parts (left) has a shorter slot than that shown in later manuals (and in all known parts). Racks in the models are also shown with only one end hole, and with a long slot and no end hole. By 1913 the models had



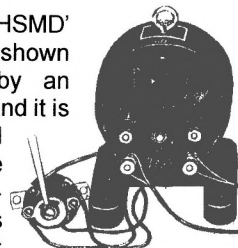
Cable Railway). In some of the later models, as in the No.6 Steam Shovel (right), the Rack is used as Rack Strip bolted to the frame.

The last 8 models were obviously inspired by some of the simpler models in



the Hornby System of Mechanical Demonstration, though with improvements in some cases. They include a Roof Truss, Belt Drives, a Governor, and a Block & Tackle. Hornby followed suit with 8 of the HSMD models in his 1913 manual - more interesting ones in the main but they needed parts like the Spring Balance which were not included in the Sets. The 8 AMB models were the only ones not redrawn in the 1913 manual.

One of the 'HSMD' models is shown being driven by an electric Motor, and it is advertised, and illustrated at the end of the manual (right). It has no number but



looks the same as the 200 shown in OSN 11, except that it isn't on a base (though one is mentioned) & the separate, optional, reversing switch (called a rheostat) is different. The Motor is said to be black enamel with nickel trim, to stand 4½" high, including the base, to weigh 2½lb, to run from 2 or 4 dry cells, & to have a 1⅜" Ø drum armature, with a ⅞" shaft pulley.

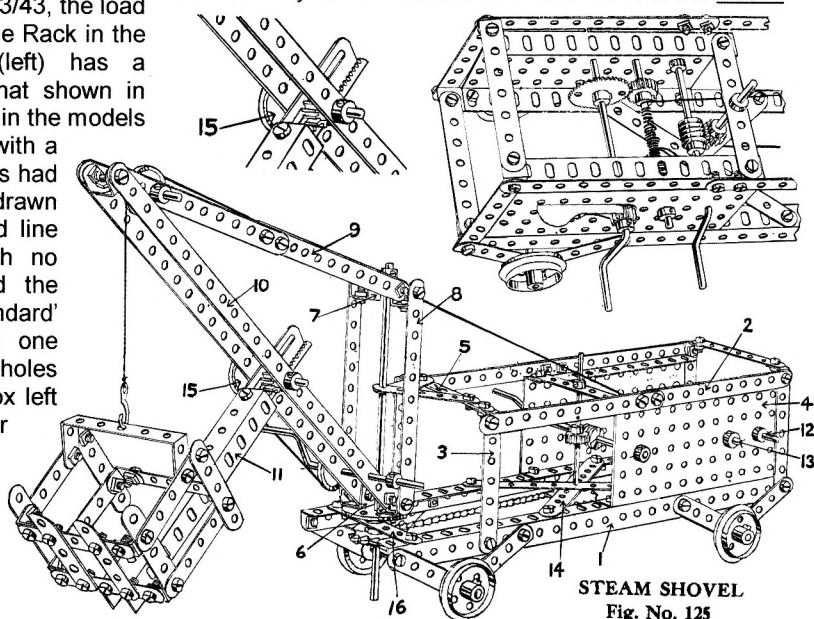
Other Notes Don Redmond sent summaries of 3 manuals. A ©1913 manual corresponds to the 1913 in 13/340 except that the No.2 models are from #40 Revolving seesaw, on p10, to #47, Windmill, on p14. The cover is the red pattern/Kling Litho type.

A ©1914 one has the same type of cover and the details are as given for 1914 on the left in 11/280. Note though 2 mistakes in the latter: the first No.5 model should be on p33, and the second name should be TURNING LATHE.

The third has the vertical stripes/Artcraft Litho cover and ©1915 rubber-stamped on p1. The models are as 1915 / 1916, and I think this is the 1917+ of OSN 13.

Don also mentioned that the models in his ©1914 are often shown half-size compared with his ©1913 - for example, the No.6 Mountain Cable Railroad, and that this model is full-page again in his rubber-stamped ©1915. I haven't seen this model in the 1915 or 1916 manuals, but it is full-page in both 1913 & 1914, so there seem to have been different editions of certain manuals in these years, and in later years too in all probability.

Considering that AMB continued until 1921, and the large number of editions in the early years, it is interesting that the only known manual from after 1916 is the 1917+.



STEAM SHOVEL
Fig. No. 125