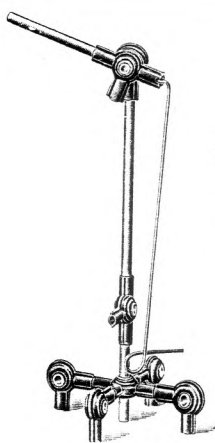


EDITORIAL Two items that there was no room for elsewhere. First, David Hobson tells me that an exhibition devoted to the History of Constructional Sets will be held in Switzerland next October, at the Kindermuseum, Baden (near Zürich). Details can be obtained from Peter Hartmann, email: peter-hartmann@bluemail.ch.

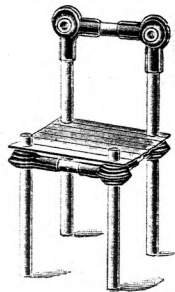
Second, more on MECCANO in the U.S.A. Kendrick Bisset has recently launched a new web site devoted to the subject: www.usmeccano.com - it is still being developed but to date includes a list of all known U.S. manuals

and Meccano Magazines. In addition three articles by Kendrick have appeared in the *Southern California Club Newsletter* (www.erecator.webnexus.com): 'U.S. Meccano Inventor's Accessory Outfits' in the April, 1998 Issue; the 'History of American Meccano Magazine' in Issue 1 of 1999; and '1928-30: U.S. Meccano Years of Transition' in Issue 3, 1999. This last completes the partial story in 14/388, and adds more detail. Another interesting article in Issue 2, 1999 of the N/L, is an account by Charlie Pack of a Gilbert 1938 Meccano No.7 Set.



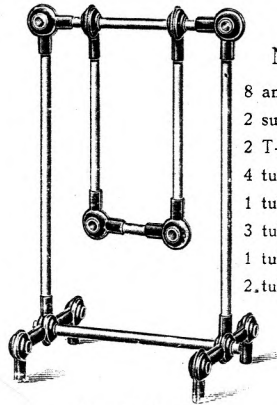
Nr. 7 Signal

- Nr. 7
- 1 support
 - 1 star
 - 2 T-pieces
 - 4 angles
 - 5 tubes 1 1/8"
 - 1 tube 2"
 - 1 " 2 3/8"
 - 1 " 4 3/4"



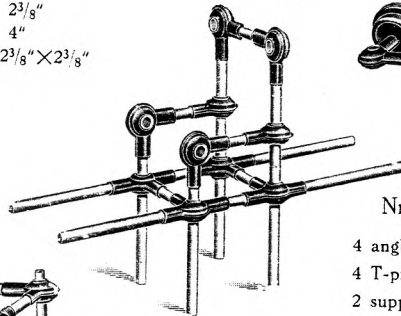
Nr. 6 Chair

- Nr. 6
- 6 angles
 - 5 tubes 1 1/2"
 - 2 " 2 3/8"
 - 2 " 4"
 - 1 plate 2 3/8" x 2 3/8"



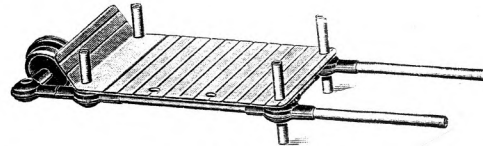
Nr. 11 Swing

- Nr. 11
- 8 angles
 - 2 supports
 - 2 T-pieces
 - 4 tubes 1 1/8"
 - 1 tube 1 1/2"
 - 3 tubes 4"
 - 1 tube 4 3/4"
 - 2 tubes 6 1/4"



Nr. 23 Sedan chair

- Nr. 23
- 4 angles
 - 4 T-pieces
 - 2 supports
 - 7 tubes 1 1/2"
 - 4 " 2 3/4"
 - 2 " 3 1/4"
 - 2 " 4 3/4"

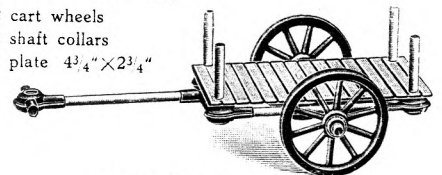


Nr. 19 Wheel barrow

No. 26

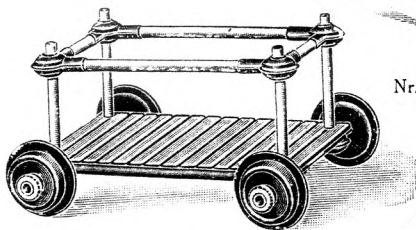
- 4 angles
- 2 stars
- 1 T-piece
- 2 tubes 1 1/8"
- 6 " 1 1/2"
- 4 " 2"
- 1 tube 3 1/2"

- 2 cart wheels
- 2 shaft collars
- 1 plate 4 3/4" x 2 3/4"



Nr. 26 Two-wheeled Barrow

- Nr. 19
- 2 angles
 - 4 T-pieces
 - 2 tubes 1 1/8"
 - 2 " 1 1/2"
 - 3 " 2"
 - 2 " 3 1/4"
 - 2 " 4"
 - 1 plate 2 3/4" x 4 3/4"
 - 1 " 1 1/8" x 2 3/4"
 - 2 railway wheels



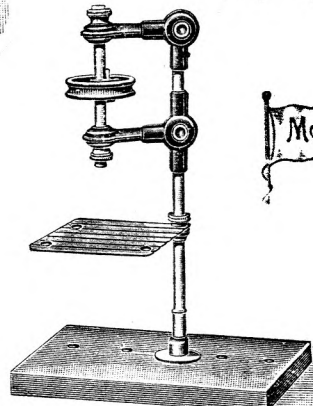
Nr. 32 Truck with railing

Nr. 32

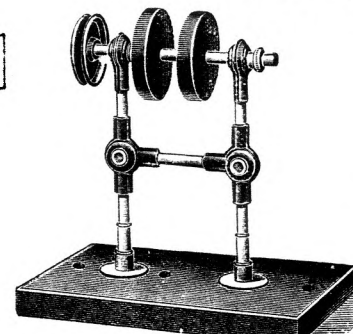
- 4 T-pieces
- 4 angles
- 4 railway wheels
- 4 shaft collars
- 1 plate 2 3/4" x 4 3/4"
- 4 tubes 1 1/8"
- 4 " 2"
- 4 " 2 1/8"
- 4 " 4"

Nr. 36

- 1 T-piece
- 1 angle
- 2 supports
- 2 tubes 1 1/8"
- 1 tube 1 1/2"
- 1 " 2 3/4"
- 1 " 3 1/2"
- 1 set screw
- 1 fixing standard
- 1 washer
- 1 driving wheel
- 1 cut key
- 1 plate 2 3/8" x 2 3/8"
- 4 shaft collars



Nr. 36 Drilling machine



Nr. 34 Polishing machine, double

- Nr. 34
- 2 T-pieces
 - 2 supports
 - 4 tubes 1 1/2"
 - 1 tube 2"
 - 1 " 3 1/2"
 - 2 set screws
 - 2 fixing standards
 - 2 washers
 - 1 driving wheel
 - 1 cut key
 - 2 polishing wheels
 - 2 shaft collars

Moko's "Simplex" Metal Constructor

More on this German System overleaf

'New' System - MOKO'S SIMPLEX

Clive Weston recently acquired a No.0 Set of this simple system from Australia - the main parts are Tubes which push into Connectors. Beyond the name 'Moko' no details of the maker are given anywhere on the box & manual except 'Made in Germany' & 'Made in Bavaria' in tiny letters, and the logo left.

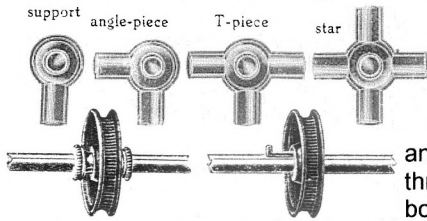
However *Baukasten* gives some

details of the firm that used the Moko flag logo - it was the Nürnberg wholesale & export business of Moses Kohnstam (1875 to after 1933). The BK note continues (translation courtesy Werner Sticht): 'This firm sold many products from various Nürnberg & Fürth [near Nürnberg] enterprises, often labelled with the 'Moko' logo. One such, SIMPLICICO [see 6/115], was similar to Bing's STRUCTATOR, but by an unknown maker, and was sold by Kohnstam in 10 sizes (for 16 to 115 models).'

As noted in 15/412, there was a German SIMPLEX set in the early 1930s, but nothing is known of it except that it was made by Saalheimer & Strauss of Nürnberg - another Bavarian company but with a different 'double-S' logo.

Clive kindly lent me his MOKO'S manual, and sent photos & notes. The manual is in English with dimensions in inches, but they only approximate to the actual metric measurements. So it remains to be seen if the system was sold in other than English speaking markets, and if so under what name. No indication of date is given either but at a guess it might be the early 1920s.

The PARTS Models which show the various parts are on the front of this Issue. The **Tubes**, about 5.3mm Ø, are rolled from thin steel with a gap of ½-1mm between the edges. They are nickel plated and are in 10 lengths: 3-8cm in 1cm steps, & 10-16cm in 2cm increments. The 4 **Connectors** (below - Single-ended, Angle, 'T', & 'X') are made from two black steel pressings, with the edges of one folded over the other to hold them together, and with a tube pressed through the centre. Its bore in the Single-ended

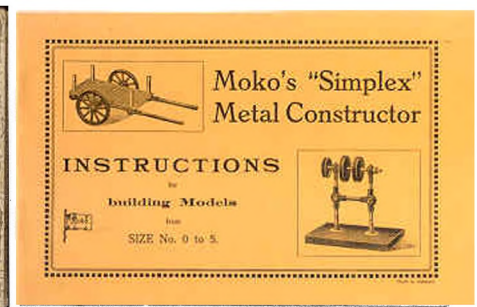


Connector is large enough to allow a Tube free movement, but the Tubes are gripped quite tightly in the others. There are 4 **Wheels** - Pulley, Flanged, Spoked, & Polishing. They are free on the Tubes, located by knurled **Collars**, above left, ('which through the action of a spring will keep the wheels in proper position'), or made fast using the L-shaped Key (above right). 3 **Plates** are shown, possibly aluminium, 7*12cm, 6*6cm, & 3*7cm, and they appear to just push over the Tubes. The smallest is formed and is used in only one model, the Wheel barrow, Nr.19. A **Base**, no doubt wooden, can be fitted with **Sockets** to carry Tubes. The **Socket**, presumably shouldered, passes through a **Washer** into the Base, and screws onto a **Set Screw**, the square head of which is held in a recess in the bottom of the Base.

The SETS The 5 groups of models in the manual are for 'Boxes Nr.0 and 1', Boxes 1½ & 2, Box 3, Box 4, & Box 5. The differences between Sets 0 & 1, and 1½ & 2 are not explained. From the models the 0/1 models need Tubes up to 12cm, & the 2 larger size Plates; the extra parts needed for the others are: 1½/2, 16cm Tubes; 3, Flanged & Pulley Wheels, a small Plate; 4, 2 Spoked Wheels; 5, 2 Polishing Wheels, a Base & 2 Sockets.

The No.0 as found had just Connectors & Tubes up to 12cm long. Its box, above, is 10½*7½*¾" and the broken patterned, fawn lid has an orange label printed in black.

The MODELS SUMMARY OF MANUAL •Name: Moko's Simplex Metal Constructor No.0 to 5. •Details of maker: none, but 'Made in Germany' on C1 & 'Made in Bavaria' on p10. •No dates or Ref Nos. •Page size: 235*153. •No. of pages: 10+covers. •Language: English. •Printing: shaded line drgs of models; black on



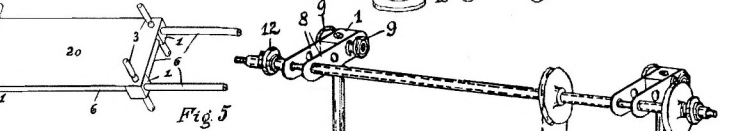
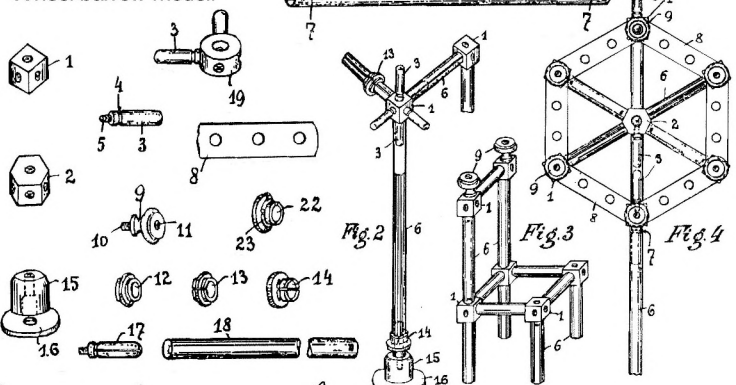
light orange covers. •No Parts List or Set Contents (some parts shown on p1). •Sets covered: 0 & 1, 1½ & 2, 3, 4, 5. •No. of models for each set: 10, 8, 6, 8, 8. •Name, Model No., Page No. of first & last model of each set: 0/1: Sawing trestle, 1, 2; Stretcher, 10, 3. 1½/2: Swing, 11, 4; See Saw, 18, 5. 3: Wheel barrow, 19, 5; Pulley Block, 24, 6. 4: Child's Bedstead, 25, 7; Truck with railing, 32, 8. 5: Draw-well, 33, 9; Windmill, 40, 10. •Other notes: C2-4 blank.

The manual has a fair selection of simple models - none are any more ambitious than the ones shown here and they seem to just about represent the limits of the system.

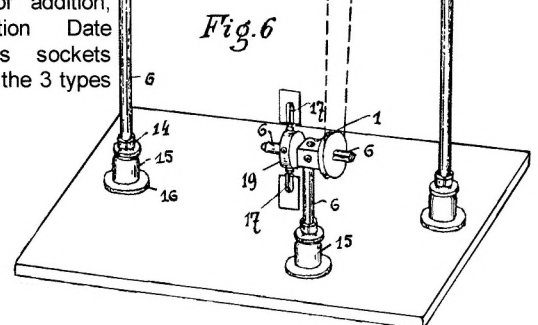
SIMPLICICO With the mention of this Moko product earlier it's worth mentioning a couple of points, both thanks to David Hobson, which have emerged since the OSN 6 note. First a definite date for the system in the UK, from a note in the Oct. 14th 1914 G&T, that Hyman & Abrahams of 30 Brides St., London had sets available.

Second a UK patent which, while there is no positive connection with SIMPLICICO, appears to be about it. It is No.28926, Application Date 15th Dec. 1913, in the name of Adolf Huck, manufacturer, of 63 Gostenhofer Hauptstrasse, Nürnberg. (A Nürnberg firm, J.A.Huck, formerly H.Huck, proprietor Adolf Huck, is listed in BK. It was founded in 1919 and produced TECHNICO/TECHNIKO, which according to EZ was Bing's STRUCTATOR renamed.)

The Patent shows hubs, 1, 2, 19, with tapped holes into which pins, 3, screw. Tubes with a longitudinal split, 6, in various lengths, push over the pins and the notch, 7, engages the groove, 4, in the pin. A clamping ring may be pushed over the joint to make it firmer, as in Fig.2. 4 types of ring are shown, 12, 13, 14, 22: solid, split, double split, 2-piece held by a spring hoop. As an alternative unsplit tubes, 18, could be used with slotted pins, 17. Other parts are a foot & washer, 15, 16; various lengths of strip, 8; a connector, 9, which could be used as a screw (Fig.4) or decoratively (Fig.3); and plates (20, 21 in Fig.5). The plate 21 is angled similarly to the one in the 6 SIMPLEX Wheel barrow model.



A UK patent of addition, No.6225, Convention Date Jan.23, 1914, has sockets instead of pins, and the 3 types below are shown.



More on STOKYS When I wrote the notes in OSN 23 I wasn't aware that a comprehensive history of the system already existed. It is called '**Stokys Sortiment**', which I'll translate as '**Stokys Products**' (SS for short), and was prepared by Urs Flammer about a year ago. I'm grateful to Werner Sticht for bringing it to my attention and showing me his copy. The only problem is that it is in German, but much of it can be understood without much help from a dictionary, and for the rest, one of the several free online translation services available on the internet may be worth trying.

The work consists of some 70 punched A4 pages, photocopied double-sided, and clipped into a binder. It starts with a 5 page historical summary, followed by a list of all the sets with their dates. Next the contents of the sets at the beginning of the 1950s, and then 33 pages with tabulated lists of all the parts & motors with illustrations, dates and notes on material & changes. These include the manuals, and their covers are shown on later pages, but no details of the models in the manuals are given, and I don't think the Editions in which the models were changed are noted. Also noted are changes to the set packaging but without details. Finally particulars of 3 other systems produced by Stockmann - CLIP, CITY, & MIGROS - and copies of 3 Swiss patents, including one for CITY, plus the German one.

Altogether a most useful contribution to MCS history. Readers wishing to buy a copy should write to Urs at Eichbühlstrasse 26, CH-8618 Oetwil am See, Switzerland, or email to 'urs.flammer@record.ch'.

Returning to OSN 23, some of the dates & other details given there do not agree with those in SS, even when the N/L material came from dated sources. Perhaps the explanation in some cases is the difference between the real situation and what was published in lists, etc.

One area not covered in the OSN 23 article is the years **1942-44**, during which the sets in the range available in 1945 were gradually introduced, and the parts were made from the materials then available: zinc alloy for the Plates & Strips (of rectangular section at the time), aluminium for the Gears, etc, and plain steel for the Axles & N&B.

Werner also sent details of his **1987 0-2, 3-4 & G1/G2 manuals**, which have the 'Digger' FC, all with a yellow bottom panel; '10.87.UDL' on the IFC; and just the Stokys name & address on the yellow back covers. Otherwise they are the same as the 25th, 16th, & 13th Editions respectively as described in 23/675 except that in the '3-4' the Set Contents shows additional parts in the **G1 & G2 Sets**. They both have a Ratchet Wheel (#126), and the G2 has one each of the Small & Large Bevels, #120 & #121.

1981 ONWARDS The notes in OSN 23 covered the years through 1981; later developments have been noted in 7/166, 11/291, 13/335 & 16/453. But going through SS, there are two ranges of products which I don't think have been mentioned. The first, 12 **Minimodelle Sets** (#2211-4, 2221-2, 2231-4, 2241, 2251) for Lorries, a Helicopter, etc., available from 1986 to 1988. The other, listed only in 1984, comprised 2 **Solar Cells** (#3001-2), & 6 **Electronic Units** (#3200-4, 3250) to control lights & motors, and to make sounds.

One other item from Werner, on the **black M4 N&B** noted in 7/166, which were introduced in 1988. Their sizes remained the same with 5.5mm diameter heads, and Nuts 7mm A/F (to DIN 934), but smaller Nuts, 6mm A/F, are also available, and these can turn within the raised edges of the Strips without damaging them.

To continue the story, I now have, thanks to Werner, a **1998 Price List**, and it shows a few changes since the 96/97 one of OSN 16. On sets, a new one is '**Uhr 1**', Wanduhr (Wall Clock) mit Quarzwerk, but no illustration unfortunately - it is said to be suitable for beginners and only costs FR.45, so no doubt it's a commercial quartz movement in a suitable framework. The set to make the **Designing Machine**, now numbered SM 06, has been reintroduced.

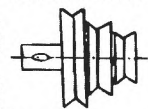
Also there's a new **Battery Box**, SE 02, with forwards/reverse for the GM motors. The **ET Packs** of parts aren't mentioned.

New or reintroduced parts are **3h wide Perf. Plates**, 5,7,9,11,17,24,32h long; **2*1h L-Girders** 8,11,16,24,32h long; **3*1h L-Girders** & **1*2*1h Z-Girders**, in the same lengths plus 78h; and an **Obtuse A/G**, 11h long. The male/female ended **Half Shafts** from the Diff are now listed as #W03, 55/75mm long.

No longer listed are the **Curved Strip** (by mistake I hope); the **78h Flat Girder**; the **35mm Pulley**, R51 (the PN that used to be the Cone Pulley); the **LH Worm** (sad, a useful part); the **Formed Handle** (very sad, a quite unnecessary part but a touch of class); the **Emery Wheel**; the **115mm Ø Geared Bearing**; and the 1m length of **Spring Cord**.

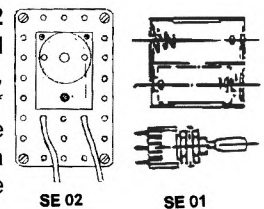
An even later **2000 Price List**, dated 1/9/99, kindly send by David Lawrence, has a few more changes. One set has gone, the supermodel **Skip Lorry outfit**, and one has been added, a simple **Jeep KP12** for beginners, but there's no illustration. The **Parts Packs** have been revised and now there are 23, from ET01 to ET62. The large FR.200/220 ones have gone; the rest have been revised and are priced from FR.10 to FR.16. New are a Pack of Flat Brackets, 4 of Tyred Wheels, & 2 of Lamps; gone are one of Pulleys, 2 of Gears, & 2 of various small parts. The new Packs are numbered ET 01, etc against ET 01-1, etc for the earlier ones.

Additional parts are 5*8h **Plastic Plates** in blue & yellow, P46.47 (as well as the existing green & red); a new R51, now back to being a **Cone Pulley**, with 18/26/32mm diameters as before but from the illustration, right, it may be fabricated rather than solid brass; an 11/44t **Double Gear** (I wonder why, given the existing 11/40t one); **Allen-headed Bolts** in packs of 20 & 100 (S22,23); an **Allen Key** for them (H09); and the **Spring Washer**, reintroduced, again in 20s & 100s (S24,25).



Deleted are the **A/B** with 2*2h in each arm, E12; the 1m long Motor connecting **Cable**, FS11; the **Remote Controller** for the Auto Set models, FS01. The **Curved Strip**, B01, is again not listed, so must be presumed lost - the only Curved Strip in the system, gone.

The **Battery/Switch Unit, SE02** for the GM Motors is illustrated (right) - it takes 2x 1.5v batteries, has forward/reverse, and is 6*10*4cm o/a. Also right is the **SE01**, the 'Schalter' of 11/291, apparently a battery box with a separate reversing switch.



CLIP & CITY These other Stokys constructional sets are in MCS but the dates in SS are more exact: CLIP was introduced in 1948 (the end date isn't known) and CITY went from 1953 to 1961. Another Stokys product was **MIGROS**, a small set (45 N&B) made for a large store called Migros in 1969. Apparently it didn't sell very well. The parts were basically STOKYS but they weren't stamped, and the Strips were made from 10*1.5mm rectangular section aluminium. Another difference, the Flexible Plate was yellow.

Repairing 'Paper' Don Redmond wrote that he uses Filmoplast, a German-made transparent paper (not plastic) tape, which becomes nearly transparent when applied. It's not cheap (\$20 a roll) but is supposed to be permanent, will not discolour, or become sticky. In Canada it is available from Carr-McLean in Toronto, who handle archival supplies. Staples can be replaced by linen bookbinding thread, and photocopies of missing pages should be on archival quality paper, though this usually means supplying suitable paper to the copy shop.

The METALCRAFT Spirit of St. Louis Aero Sets

The METALCRAFT Railway Wagons were described in 23/677 but the firm is much better known for its range of sets to make aircraft & airships, and in particular for the 'Spirit of St. Louis' aircraft sets. The 'Spirit of St. Louis' was the machine used by Lindbergh for his Atlantic flight in May 1927 - he had been backed by some St. Louis business men, and no doubt the interest that created spurred on one Robert E. Conway of St. Louis to apply for a patent (No.1674637) in November 1927, for a constructional model aeroplane, as assignor to the Metalcraft Corp. of St. Louis. It includes drawings of virtually all the parts in the first 'Spirit of St. Louis' set and stressed the numerous configurations possible with them, and how they could be used in different ways. In a ©1928 Zeppelin Manual it is said that distribution of the 'Spirit of St. Louis' Set began in October 1927; MCS gives the end date as 1940, and 1935 has also been mentioned. (The 'manual cover' in my MCS, which is probably a title page, has a copyright date of what appears to be 1938, but when seen through a lens it looks as if it was originally 1928 with the bottom half of the '2' missing, and then the bottom of a '3' added to it.)

A list of sets in the ©1928 Zep manual starts by saying that the 'Spirit of St. Louis' Airplane set was Metalcraft's first ACE (and that over half a million sets were sold in the first year); that thousands of enthusiastic air fans asked about other toys, hence Ace No.2, the Zeppelin Construction Set, and Ace No.3, the Spirit of St. Louis' Hanger. The title page of the manual is headed 'The "ACE II" of Toys', and the same heading is used above the list of sets - I suppose the 'II' indicates No.2, ie the Zeppelin Set.

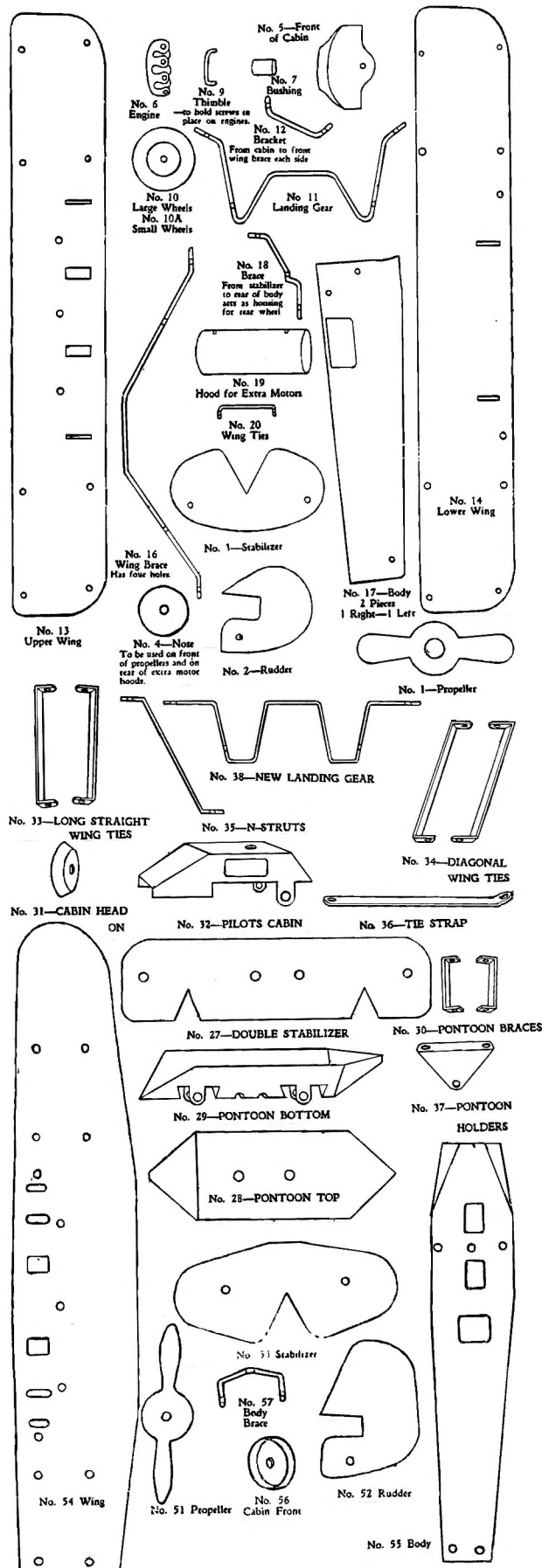
At some time after 1928 the name Lyons (see 16/459) started to appear on sets and in the literature, often with the shield logo left - red with 2 yellow lions. (On the date, it may have been after 1930 because the name Lyons is not mentioned in various ads up to & through that year. Unfortunately no later ones are to hand.) A flyer in colour makes much of the Lyonsport

Aero Club, which youngsters could join by sub-mitting Certificates of 'flying hours' that were in each set. Up to 4 were needed and depending on which sets were bought the total cost would have been from \$4 to \$10. A 'handsome winged emblem' with 'PILOT' on it was given to each new member.

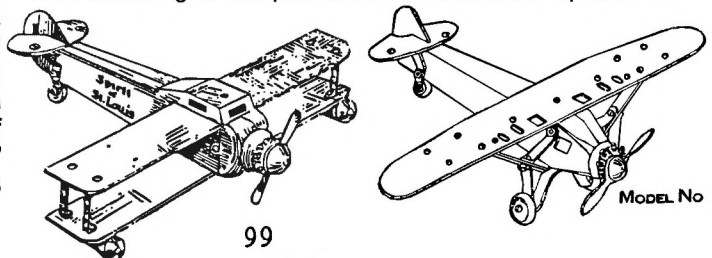
The AIRPLANE SETS The Patent talks of 'Aeroplanes' but 'Airplanes' is generally used in the Metalcraft literature. The ©1928 Zep manual lists four 'Spirit of St. Louis' Airplane Sets. **No.80** (should that be 800?), at \$1, builds over 5 models and has 27 major parts plus 53 N/B. **No.810**, price \$1.50, builds over 25 models from 40 parts & 80 N/B. **No.820** is \$3 and the 61 parts & 110 N/B (170 parts in all including a combination screw driver wrench, it says) allow over 100 models. **No.830** at \$5, has 95 parts plus 175 N/B, and builds over 250 models including 'Spirit of St. Louis', America, Woolaroc, & Pride of Detroit. With it is a book on aviation engineering.

The 4 sets in the 'Lyons' flyer have the same prices but are numbered **No.950 to 953**. The number of models for each is the same except the No.950 builds over 10, but no details of the contents are given. As will appear there had been significant changes to these Sets, but first:

The PARTS The main ones, excluding N&B, are shown in the next column. #1-38 are parts in the '800' sets; #51-56 at the bottom, are alternative parts used in the 3 larger '900' outfits. Both types of rectangular **Wing** are flat & 11½" span; the tapered one is 14¼" and is slightly curved chordwise, with impressed ailerons, & ribs every 1⅜". Both types of **Body Halves** are deep pressings so a pair with a nose added make a fully enclosed fuselage. The **Front of Cabin** #5 is bolted onto a pair of the shorter ones (#17, 5¾" long), as in Model 99, right, while the **Cabin Front** #56 goes



onto a pair of the #55 (scaled at 8½" long), as in the Model No.1 below right. The pair of #17 to hand have 'Spirit of St.

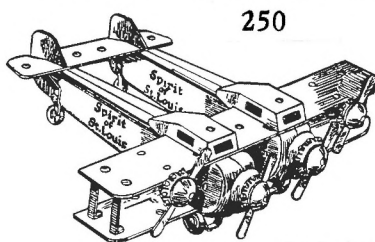


Louis' stamped rather faintly into their sides behind the window - I haven't seen a #55. The other parts in two sizes are the **Stabilizer** (Tailplane), span 3" & 4¼"; the **Fin**, 1⅝" & 2½" high; & the **Propeller**, 3" (the paddle one) & 3½" dia. The **Motor Hood** (Nacelle) #19 is 2" long & ¾" Ø, and also serves as a float & long-range tank. In these roles it is usually fitted with a hemispherical **Nose #4** at each end, with a long Bolt holding all together. This Nose is also fitted ahead of the Propeller & looks like a spinner but is actually stationary, so the Propeller turns behind it. The **Pilot's Cabin #32** & **Cabin Head Extension #31** are add-on parts for the Short Fuselage, as in Model 99; the former is also used with the long Body, but I'm not sure about the Extension. The **Engine** (block) #6 has lugs for 9 black RH Bolts that have no screwdriver slots - they are held in place, with their heads inside, by a Thimble #9, and their shanks represent finned cylinders. The thread of all the **N&B** is 6-32, with hex Nuts & RH Bolts up to 3⅞" long. **Wheels** are silver painted wood, about 1⅞" & ⅝" Ø. The **Span'driver** left (50% full-size) was found in a No.810 outfit and measures



2½" o/a. **Colours.** Most parts found are a dull, patchy grey. The finish was described in contemporary ads as 'silver & rustproof', 'steel treated to resist rust', & 'dull finished steel'. The Hoods & their Ends are sometimes found copper plated (the examples known have come from '900' sets). The long Wing & the long Body are also found painted, in orange & yellow respectively.

The SETS All the '800' sets have the 'smaller' parts. The one most commonly found is **No.810** and the main parts in it are 1 of each type of Wing, the Body & Tail parts, 2 Hoods, & 3 Engines/Propellers. The **No.80** is an unknown but has 13 fewer parts, perhaps 2 Hoods, their Noses, & associated Engines/Propellers. The contents of the **No.820** are given in MCS, p6, and the main extra parts compared with the 810 are the Cabin parts #31,32, & the Struts #33-36, & 38. Not a lot really for double the price. The main extra parts in the **No.830** are a second Body, Fin, Pilots Cabin, etc; an extra Engine/Propeller; 2 Pontoons with their supports & extra Small Wheels; & the Double Stabilizer. This allowed the somewhat monstrous type of machine left.

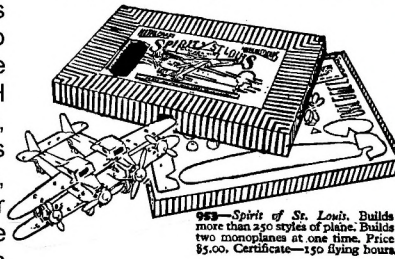


It is believed that the **No.950** is very similar to the No.810 but has 5 fewer major parts, probably a Wing & the 4 Wing Ties, #20. The other '900' sets have only the larger sized components. With those substitutions, the **No.951** has all the parts in the No.810, except that the Front of Cabin #5 is replaced by the Cabin Front #56. No details of **Nos.952 & 953** are available but they probably follow along the lines of the 820 & 830. An ad says that the parts in the 953 allow 2 Monoplane to be built at the same time, and this was probably true of the No.830 too.

Packaging. The lid of a **No.810** Set below is printed in red & black on a light cloudy background. Aircraft are shown flying over the Statue of Liberty to the Eiffel Tower, with 'Lindy Did It' underneath. It measures 14"8¼" and the sides, & inside the box, are striped red & white, with the bottom inside edged in blue with white stars at intervals. The

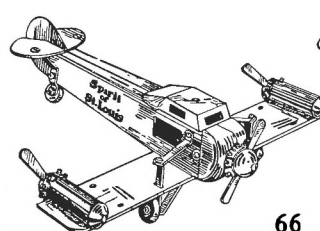
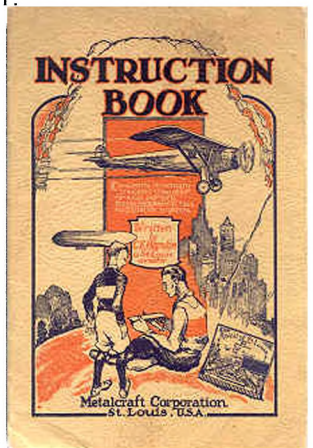


small parts are in a box about 6¾"2¾" with a red lid which has the Set No. on it in tiny letters. In a Fall 1928 Sears advert the 250 model Set is shown in a similar striped box, 19½"13¼"1⅝", with 2 layers of parts. The **No.950** lid below right is as shown in the 'Lyons' flyer, but the No.953 set in it, below left, has a red/white striped lid with a white label featuring a large blue drawing of the Lindbergh model. A photo of a No.951 label is similar but has a light coloured photo (or shaded drawing) of the model on a blue ground. Part of its fuselage is covered by a LYONS shield.

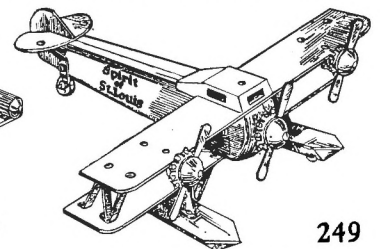


MODELS As with most sets of this sort the various models rely on different combinations of the components, even if many of them look rather strange & unlikely, at least on paper. However in fairness my No.810 Lindbergh 'Plane looked much better made up than I'd expected from seeing the parts & the illustration. And when built it was a very solid model. The simpler models are probably the best, although the Strut arrangements are sometimes a little untidy, as in Model 66 below. Another problem is that even with the longer Wing, the wing engines have to be too far out for realism. The Long Wing Ties in the larger sets allow a Biplane's upper wing to be raised above the top of the fuselage, but open cockpits, often seen on such machines, are not a feature of METALCRAFT.

The **Manual** for the No.830 has 52 pages, 153*223mm, plus covers. The front cover, right, is buff printed in orange & black - the set number is only on the title page, together with ©1928. In the centre shield of the cover is, 'Written by C.E.Hamlin a St. Louis aviator', and the first 6 pages are an account of a flight with a brief explanation of the use of the flight instruments and controls. Next 3 pages of dad & son playing with their set and deciding that they'll soon need a Hangar, & other outfits to provide spares, etc. Then detailed instructions on making the basic 'Spirit of St. Louis', as p5 of MCS, followed by 249 other models with a line drawing of each, and a few words of explanation for models through No.50. Model 2 on p13 is 'Monoplane with 2 auxiliary gas tanks', and No.250 on p48 has no name. The Set Contents are on p51 and the parts in Set 810 are illustrated on p49, with the extra parts in the larger outfits on p50. Other sets available are briefly described on p52. Two of the models are shown below.



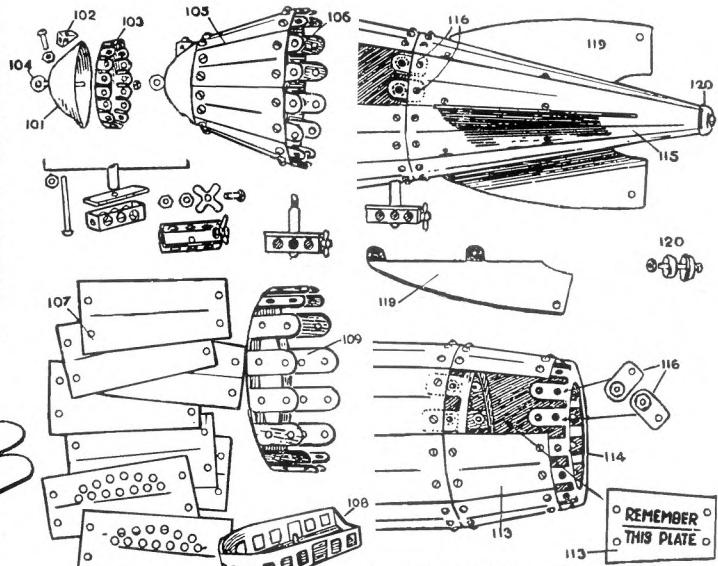
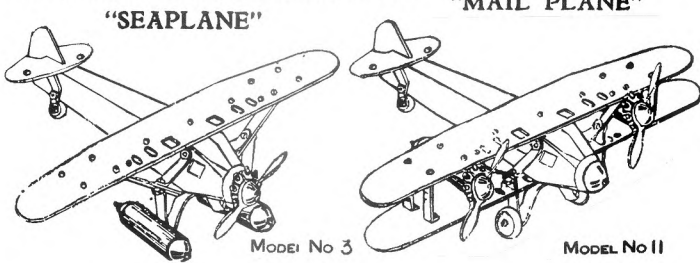
66



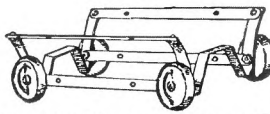
249

The Manual for the No.951 has 8 pages of about the same size. The photocopy to hand has no covers but all known covers are like the one above. Detailed building instructions for Model No.1 (already illustrated) are given on

p1, followed on pp2-5 by a single line drawing of each of the other 24 models, with again a few words of extra explanation in some cases. They are the same machines as the first 25 models in the 830 manual except that the larger parts have been used, and in all but a couple of cases their names are the same too. Incidentally in both manuals No.5 "BREMEN" MONOPLANE is identical to No.25, an Air Propelled Snow Glider in the 830, and an unnamed Low Wing Monoplane in the 951. The Set Contents are given on p5 & illustrations of the parts are on p8. The prices of additional N&B, and brief notes on all the other '900' sets are given on pp6-7, together with Metalcraft's address: 5101-15 Penrose Ave., St. Louis. Two of the models are shown below.



UNDER-CARRIAGE FOR ZEPPELIN

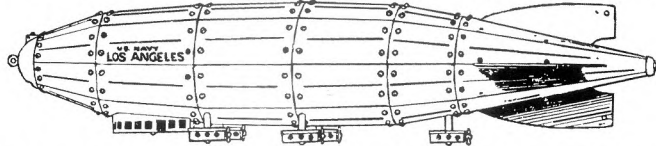


are 2 of the Plates 107 which have holes in them, and are fitted adjacent to the Cabin. The 5th model is 'The Pony Blimp' and is similar but with the 2 centre bays omitted. Shown inside the front cover is the Trolley (left) to allow an Airship to be moved along the ground. It is made from various Aero & Train parts but it isn't stated whether they are included in the Set. Another item not in the Contents List is a crayon - to quote the Manual, 'Mark the name of the ship on front with black crayon from parts box, or if you have a set of water-color paints, rub your brush on some soap and then paint the name on the ship'.

The ZEPPELIN SETS There are three of these and as far as is known no changes were ever made to them. In the ©1928 Zeppelin manual the only Zep outfit mentioned is called The Zeppelin Construction Set, but it is numbered **No.880** in the ©1928 Airplane manual. Later references, when the '800' Airplane sets had been superseded by the '900' series, show 3 sets, Nos.960, 961 & 962, and the 962, the largest, was the same as original Set. What follows is based on the ©1928 manual, and various adverts & photographs.

The **No.962**, called the Graf Zeppelin Set, cost \$5 and contained some 500 parts: about 90 major of 22 types, and the rest N&B. In a photo the parts have a metallic look and are described as 'gray' & 'silverine' in ads. The size of the box is given as 27 $\frac{3}{4}$ *10 $\frac{1}{4}$ *2"; in the 'Lyons' flyer it has red &

No.960 & No.961 What follows is mainly from ads since no manual or other hard information is to hand for these sets. The **No.960** had 100 parts (178 in another ad) in a box 9 $\frac{1}{4}$ *8 $\frac{1}{4}$ *1", and the price was \$1. 8 models were claimed and the parts were said to be painted yellow with red trim, or in one ad, orange & red. The model on the lid of a 960 set in a 1930 UK ad (below) was stated to be 18" long, and in another ad the same length is given and a diameter of 4". 2 models in photos look very similar - the one at the top of the next column is painted orange and the other green, with, in both cases, the Nose, Fins, Engine House, & Cabin in red. However it isn't known for sure that those were the original colours. As can be seen each bay is made from 4 Formed Plates, but how they are joined isn't clear. Circular Girders might be unnecessary or too expensive considering the model's size & the price of the Set.



white stripes and a white top with a line drawing of the 'Los Angeles' airship on it. 2 layers of parts can be seen.

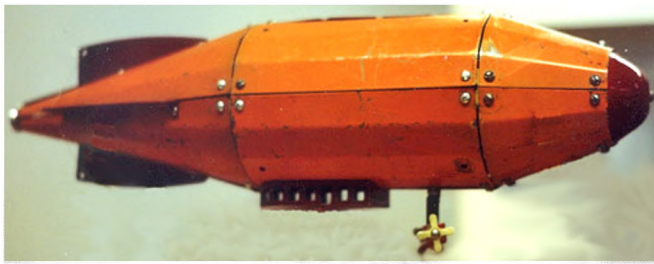
The Manual (for the original Set) has 20 pages, 8 $\frac{5}{8}$ *5 $\frac{7}{8}$ ", plus covers. The front (below) is printed in red & black on yellow. About half the pages are used to give a brief historical

account of airships and a description of those on which the 5 models in the Manual are based. 3 of them are identical except for the number & position of the Engine Houses underneath, and the number of Propellers fitted to them. This is probably also true of the 4th, the R-100, described on two pages, 14 & 15, which are missing from the copy to hand. The Los Angeles (above) has all 5 Engine Houses fitted but with

only 1 Propeller each - 10 are included in the Set. The body is about 27" long & 5 $\frac{1}{2}$ " diameter, and is built by bolting the various Side Plates (8 to a circle) to Circular Girders. Some of the diagrams from the Manual are shown at the top of the next column: the model is built backwards from the nose, and forwards from the tail, and is then joined by the last ring of Plates (#113) with the Bolts for the last one screwing into 4 nut plates called Small Links (#116). The Pilot House 102, the Cabin 108, Fins 119, & Engine Houses are bolted on as assembly proceeds. Not shown in the Los Angeles above



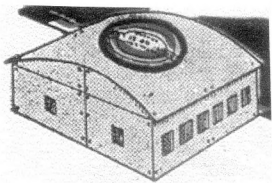
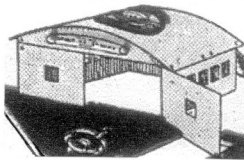
The **No.961** Outfit was \$1.50, and it contained 45 major parts plus 140 N/B, in a box 13 $\frac{3}{4}$ *10 $\frac{1}{4}$ *1 $\frac{1}{4}$ ". The pieces were



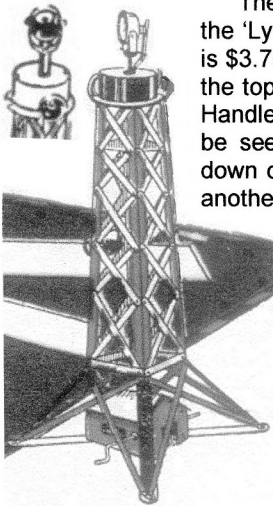
painted light grey with some nickel plated, and over 20 models were claimed. A No.961 box lid in a photo looks very similar to the No.960 on the previous page, and the model (white on a blue ground) is identical, even to the 'R100' on the side. In the ad which gives the length & diameter of the 960, the length of the 961 is also said to be 18" - but from the illustrations, the diameter appears greater than that of the 960 - otherwise they look the same.

The AIRFIELD SETS That's the name I'll use for the 3 remaining outfits in the range, the No.958 Hangar Set, the No.959 Beacon Light & Mooring Mast Set, and the No.965 Lyonsport Air Field Set

The **Hangar** is mentioned in the ©1928 Zeppelin manual, and in the ©1928 Airplane manual it is **No.890**. It cost \$1.25 and was said to be 'built in a few minutes', & 'comes in the same realistic, rust-proof galvanized finish that real hangars are made out of'. The set is in the 'Lyons' flyer



as **No.958** at \$1 and 2 views of the Hangar from the flyer are shown right, in grey with the name over the doors, and the roundel on the roof, in red, blue & yellow. In another illustration the roof can be seen to be made from 4 oblong panels, each with a N&B at the corners, and each door has 6 vertical panels along its length. The box, actually with No.890 on it, is shown with red & white stripes and a large white lid label with a drawing of the Hangar in blue.



The first mention of the other two Sets is in the 'Lyons' flyer. **No.959 Beacon / Mast Set** is \$3.75 and the model is a tower with 2 lights at the top, and a shed at the bottom with a Crank Handle through it. The lower light at the top can be seen in the scrap view; the blob half way down on the far side of the main view might be another light (the description says the model is 'equipped with bulbs') but isn't shown in the other illustrations. The purpose of the Crank Handle isn't clear, and there's no mention of a lift, or winding in the airship. One illustration shows a boy offering up the front of an Airship to the top of the mast but there's no indication as to how it would be attached or supported. The corner Angle Girders & the diagonal members at the base are shown red; also the sides of the shed in one view.

The Set is in the usual striped box, with the blue on white lid label below, showing one mast with an airship moored to it,



and another emitting 2 yellow beams of light, all against swirling cloud over an airfield with hangars etc.

Finally the **No.965 Air Field Set**, \$1, described as 'a durable fibre sheet, 40 x 60 inches; also a boy's helmet; also a wonderfully interesting and instructive booklet on air field management'. The Sheet, below, is black with the name & parts of the edges in red. On it are the blue Helmet & a tubular container, presumably the Set's packaging.



Thank you to all who contributed material for this account, including Kendrick Bisset, Chris Freeman, David Hobson, Don Redmond, Richard Symonds, & George Wetzel's web site.

More on METALCRAFT RAILROAD CAR SETS First a picture on ebay of a **No.980 Set** (mentioned in 23/677). It is in a box about 8" long by perhaps 3" wide, with the top of the lid covered by a red label. On it are, all in white, a line drawing of an open Goods Wagon, with 'Metalcraft Train Construction Set No.980' above it, and below 'This box contains 138 small parts, bolts and nuts'. The Set wasn't complete but some of the parts for the Wagon on the lid could be seen, and others including 2 Doors for the Box Car.

Next a **LITTLE JIM Train Set**, pictured on George Wetzel's web pages (www.bldgtoys.com). It looks like the label of what is obviously a repackaged Metalcraft 8 Car Train Set (see 23/677). LITTLE JIM was a brand name used by the J.C.Penney store and in this case their logo, a boy on a red circular ground, between 'LITTLE' & 'JIM', is below 'TRAIN CONSTRUCTION SET' in large blue letters. Above that is 'NATION WIDE LINES' in black. The label is grey or fawn with top & bottom panels connected by a diagonal stripe, all in green. The 8 different Cars that can be made (2 or 3 at a time, the figure isn't quite clear enough to be sure) are shown down the diagonal & along the bottom.

One of these illustrations answers my query in 23/678 about the end fittings of the Caboose - there should be a **Brake Wheel**, T-12, above the roof at one end. Kendrick Bisset confirmed this, apparently the brakeman would walk along a walkway on the roof to use it (while the train was in motion). The Wheel is a flat disk, $\frac{5}{8}$ " \varnothing , with a 0.155" center hole, and 6 holes 0.124" around the edge. It is mounted on a $\frac{3}{4}$ " Bolt using 3 Nuts. Kendrick also cleared up 2 other points. Per the manual, 'The **couplings** are designed so as to fit all types of couplings on various train sets. Each one is flat when packed in a train set and they may be easily bent to conform to the particular couplings on which they are to be used.' The T-36 **Bushings** are used in the Crane, to separate the sides of the jib at the top.

MYSTERY PARTS No.50 Some aluminium parts found by Don Redmond in Canada: 'Sector Plates, 3 rows of holes, 4" long, MECCANO pattern, painted red; with Strips, 4 & 16h, pitch 12.7mm, hole diam. 4.5mm; and a MÄRKLIN-style Hook with 'ears' (small lugs at top & sides of the square top), reasonably sturdy at nearly 2mm thick.'

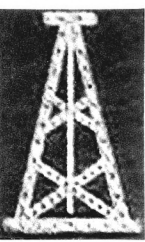
SMALL ADS

Wanted, any **MIGNON** parts or sets. Details & prices please to Orion DreamDancer, 110 Shirley Lane, Ladson, SC 29456, U.S.A., or to oriondreamdancer@hotmail.com.

The S.J.MILLER Executive Erector Set

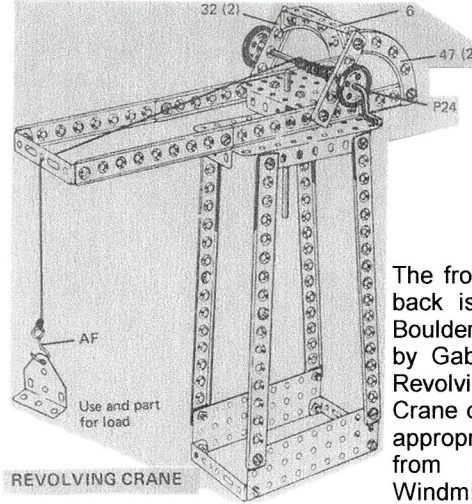
Would you believe it? A little Set with Gabriel parts, but gold plated, even the N&B. It's was the bright idea of a certain S.J.Miller (Sid) of Boulder, Colorado, in 1977. Essentially it's the 'Basic' Gabriel ERECTOR set of the day (the smallest excluding the Pocket Set), plus some other parts, presented in fancy packaging. My thanks to Orion DreamDancer for sending details & photos of this exotic production.

The box, 17⁷/₈*11⁷/₈*1¹/₈", is dark blue on the outside and the lid has 3 lines of gold foil embossed text in small letters in the bottom right corner: 'Executive Erector® Set • 24-Kt Gold Plate'; 'S.J.Miller, Publishers of Sophisticated Games, U.S.A.'; "'Erector' is a registered trademark of Gabriel Industries Inc.'. Alongside, also in gold, is the Tower below. The parts fit into recesses in a bright red moulded plastic tray

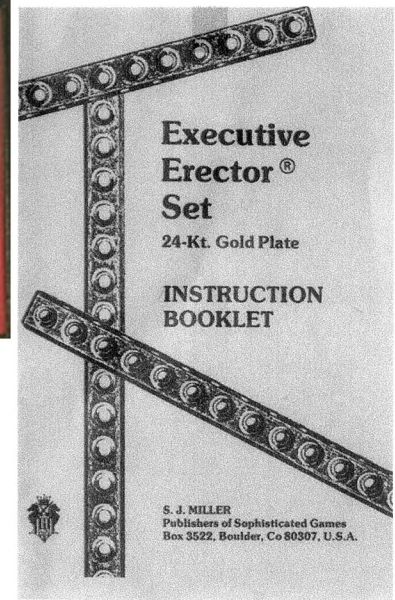


(top centre, the photo doesn't do it justice), with the small pieces in a clear plastic box. The additional parts include a 2¹/₂" Disc, A/Gs (6 each of 5, 9 & 17h), 2x 9h Circular Girders, and a Bush Wheel. There's also one 7⁷/₈" Pulley but the main Wheels are 4 yellow plastic push-on ones, first used in the Pocket Erector. In the box they are housed under the 5*5h Flanged Plate, ashamed of their plasticity in such company no doubt. There are no extra N&B, just the 45 or so of the Basic Set.

The manual, about 14*21¹/₂cm deep, has 8 pages including the covers, and is printed in black on blue paper.



REVOLVING CRANE



The front is shown above and on the back is Miller's address, 'Box 3522, Boulder, CO 80307', & '©MCMLXXVII by Gabriel'. The 22 models go from Revolving Crane, on p'2', to Traveling Crane on p'8'. All are models from the appropriate Gabriel manual, and apart from several Cranes, include a Windmill, Swing, Letter Balance, etc, etc. The Crane above, the first model in the Manual, is not quite the best one but shows most of the different parts in the Basic Set, apart from the Flat (Trunnion) Car Truck.

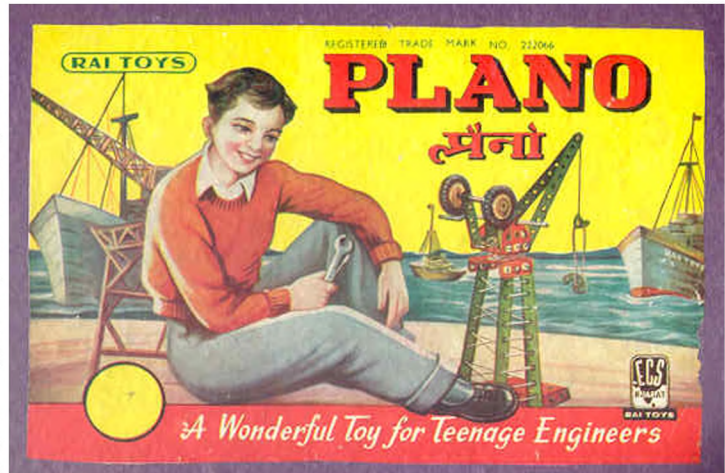
Two PLANO No.1 Sets

PLANO is the Indian system with the rather poor quality parts that was discussed in 10/258. David Hobson kindly showed me these two small outfits and though the boxes, manuals and packaging are very similar, one's impression of the parts, at first glance, is that they are from two different systems. Those in one, I'll call it the 'late' set, are very like the ones described in OSN 10, while in the other, the 'early' one (though there's no real evidence of date), they are of better quality, and the Strips & Brackets are about 13.8mm wide, against, typically, 11.5mm for the late ones. The hole pitch is the same in each (13mm) but the holes in the early parts are considerably larger at about 4.2mm.

The No.1 is a very small set and the main parts are: 2,4,4 of 11,5,3h Strips; 2x 1*5*1h DAS; 4 each of Flat & Angle Brackets (but only 3 of each in the late set); 2x 8h Wheel Discs; a Flat Trunnion; 6 Washers; about 12 N&B including 4x 1/2" long Bolts; a Spanner, a Screwdriver, & a Hank of Cord. The OSN 10 Sets were quite similar in content to two of the 1962-69 MECCANO series, but this one has no Plate of any sort, and is much smaller than even the 1954-61 No.00.

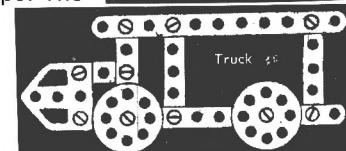
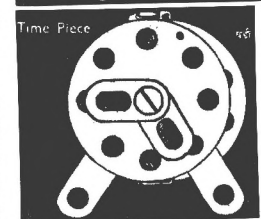
The early box is 9¹/₂*7*7⁷/₈", and the late one 9*6¹/₂*1"; both lids are the rich purple but are nearly covered by coloured labels similar to the one at the top of the next column (actually from the No.7 of OSN 10). The boy, wearing blue trousers & an orange jumper, is set against the sea & a yellow sky. The name and the bottom band are red. The early label doesn't have the TM No. at the top, and the late one is set within a 4mm white border. The parts are held to yellow backing cards by green cord and their layout varies somewhat between the Sets.

Apart from the differences already noted the parts are as in OSN 10 except as follows: in the early/late sets the Spanner & Brackets are nickel/green; the late Brackets are of very thin metal painted in a lighter green with a 'hammer'



finish; the early Screwdriver is nickel, the late one is missing.

The two manuals are the same, with 12 unnumbered pages 210*131mm deep (128mm deep for the late one). The cover (similar to the No.7 in OSN 10) is shown in MCS - also the IFC as p3/4, which shows the parts in the Set but note that both Sets here have only a single Flat Trunnion, and only one is needed in the models). There are 31 models (followed by the Alphabet & Numerals on pp10-11) and they are very simple, and often 2-dimensional. The first is a Swastik [sic] on p3 and the last a Truck on p9. The latter and 2 other models, a Time Piece & a Dance, are shown right. The back cover is reproduced on p5 of MCS & contains two No.2 models.



AMERICAN MODEL BUILDER

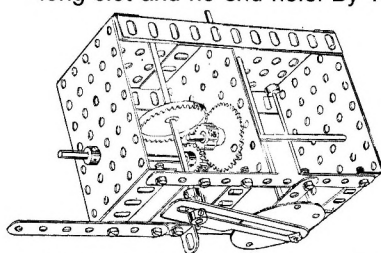
A 1912 Manual The underlining of the dates of reference manuals for particular years, started in 13/340, and used in 18/504, will be continued here. Thanks to David Lawrence a complete photocopy, apart from the missing pp1-2, of a **1912** manual is now to hand. It matches the one described in 18/504 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

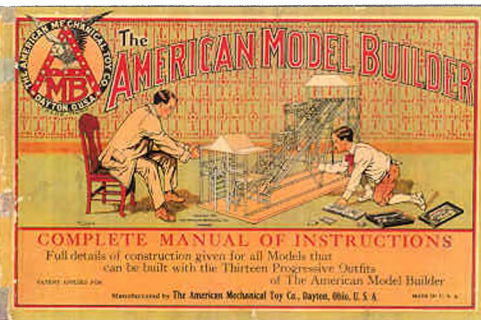
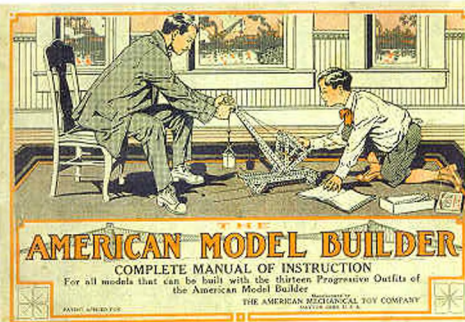
Illustrated Parts (left) has a shorter slot than that shown in later manuals (and in all known parts). Racks in the models are also shown with only one end hole, and with a long slot and no end hole. By 1913 the models had



all been redrawn as unadorned line drawings with no shading, and the only 'non-standard' Rack is the one without end holes in the gearbox left (from a Power

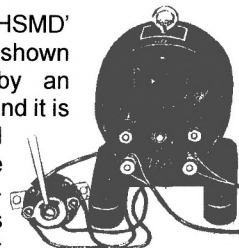
Cable Railway). In some of the later models, as in the No.6 Steam Shovel (right), the Rack is used as Rack Strip bolted to the frame.

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.



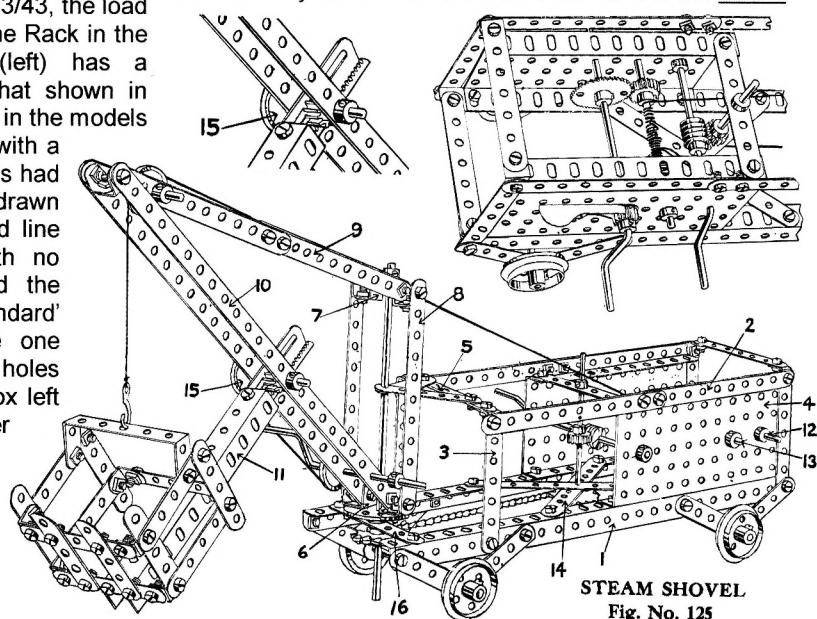
Other Notes Don Redmond sent summaries of 3 manuals. A ©1913 manual corresponds to the 1913 in 13/340 except that the No.2 models are from #40 Revolving seesaw, on p10, to #47, Windmill, on p14. The cover is the red pattern/Kling Litho type.

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+.



STABIL-ELECTRIC & ELECTRIC It had never occurred to me before, but it is strange that in all the numerous references to STABIL in OSN, no mention has ever been made of electrical sets. Even more strange when you think that the other big German players in the 1930s, TRIX & MÄRKLIN, both had electrical outfits. Now some ads have been found for two STABIL-Electric sets, but no actual outfit is known and it isn't sure that these sets ever went on sale. If they did they weren't on the market for long, judging by the run of adverts now known. From the brief details given in these ads the two Sets seem to correspond to ELECTRIC Sets 1 & 2, which appeared at about that time, and it's possible to speculate that Walthers were going to buy in their Sets from the makers of ELECTRIC and then changed their minds. The idea may have been to compete with TRIX Electro 1 and the much larger, and very rare, TRIX Electro 2. For this story I'm indebted to Thomas Morzinck, Werner Sticht, Jürgen Kahfeldt through Werner, and, for the patent details, to David Hobson.

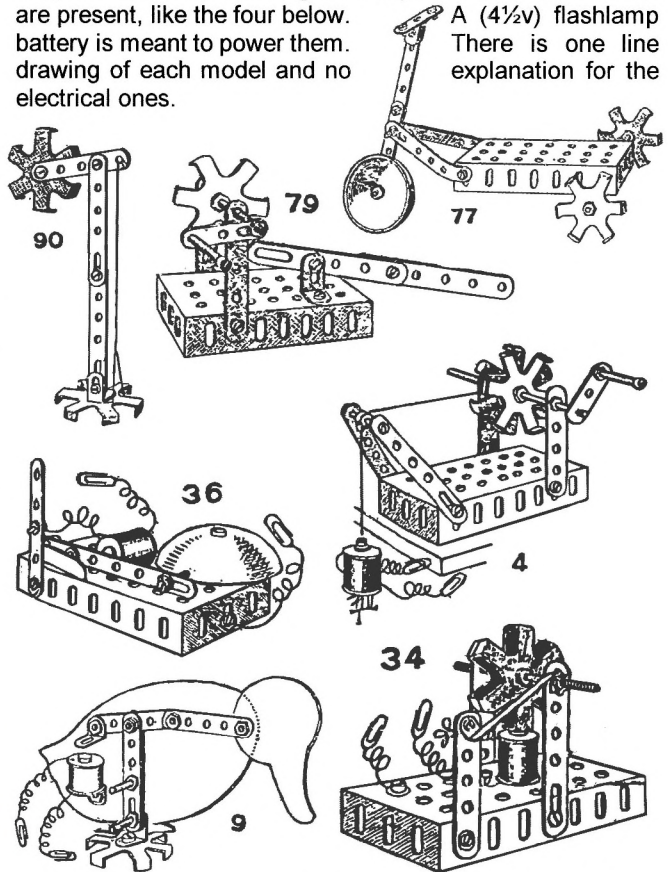
The first ad for **STABIL-Electric** is undated but is thought to be from early in 1933. The system was described as electro-magnetic, and there were two sets. The Nr.1 at RM.1 contained 43 parts and instructions showing 123 illustrations; the Nr.2 cost RM.5, had 134 parts including a mercury switch (Quecksilberschalter), and instructions for 'lots of electrical models & experiments'. Also listed were manuals for STABIL-Electric Nr.1 & Nr.2 at respectively RM.0.50/0.75, with 60/62 electrical experiments and 40/78 electrically driven models.

The two Sets, but not the Manuals, were listed again in an ad dated 5/33, but not in a similar one of 11/33. No later mention has been found.

Going on to **ELECTRIC**, a **No.1 Set** is known. The lid measures about 18*12cm and is shown below (plus its flat-

#9 is a small Spacer/Pulley, see Model 4 below. One part in the Set but not shown, is like #4 but the top end is tapered, as if to be used as a screwdriver, and it has no end hole.

The Model Sheet is about A3 size and as in the Walthers ad, shows 123 models. On one side is an Introduction & 47 electrical models, from 1.Hebelschalter to 47.Batterieever+such, and on the other the Illustrated Parts & the remaining 76 models, from 48.Ziffer, to 123.Klaviersessel. These 76 are described as 'mechanische' models but are very simple (there are only 10 N&B in the Set) and the Rotor & Bell have to play many roles. The ones below (77,79,90) are among the better ones. Some of the electrical models are very simple too, but all that might be expected from a small set are present, like the four below. A (4½v) flashlamp battery is meant to power them. There is one line drawing of each model and no electrical ones.



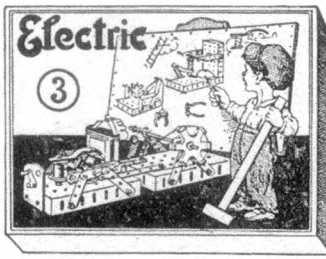
The manual for the set has the cover shown in 8/183; it has 80 A5 pages plus covers, and contains 60 experiments & 40 electrical models. The experiments run from No.1 on p3 to No.62 on p38; nearly all are concerned with electro-magnetism, or with magnetised needles, and each has a quite lengthy explanatory text. So do the electrical models and they run from No.1, Hebelschalter, on p39, to No.40, Bogenlampe, on pp76-77. All but 2 or 3 of the electrical models on the Model Sheet are included in the Manual, often with the same number; most are among the electrical models but 8 or so are among the experiments. To complete the description of the manual: the covers are in B&W with the insides blank; p1 has the Illustrated Parts/Set Contents, as on MCS p3/4; p2 some introductory notes; and pp78-80, an Index of the models and experiments.

The **ELECTRIC Nr.2 Set** is known only from illustrations in a 1937 brochure. The first shows the box lid (right) with the boy on an electrically driven Swing, made from parts including the Flanged Plate and 11 & 25h Strips. 200 models are claimed and it is said that the set contains an indestructible Mercury Switch. An unusual part, and a feature of the STABIL-Electric Nr.2 of course. The second illustration is most of the manual cover which can be seen in the No.4 Outfit on the facing page (it has '2' on it and is headed Quecksilberschalter).



tened sides). It is yellow & red with blue sides, and the boy has blue clothes. If one is looking for a connection with Walthers, he could be described as a Knirps (little chap). At the bottom 100 models & experiments are claimed. There are 43 parts in the set, as in the STABIL-Electric Nr.1, and the different ones are shown below. From a photo of the main ones, all are steel except #5 & the Brush #16 in brass, and some made of red fibre. The latter are #3 & #11 (both

also made in steel), and the cheeks of #8, which scale at 24mm Ø. The hole pitch is 12.5mm, the same as STABIL. The steel parts look a dull grey, but the Bell #6 & the top of the Ball #19 are shiny, perhaps nickel. They scale at 45 & 25mm Ø respectively, and the Rotor #2 is about 50mm in diameter. The Flanged Plate is 50*100mm o/a approximately.



The 1937 brochure shows a range of Electric products comprising other electrical sets, 'drive' sets, motors & transformers. The **ELECTRIC Nr.3 Set** (left) is the basis of the MCS entry. The contents, 108 pieces in all, including about 25 N&B, are given on p6 & are essentially all the Nr.1 parts, plus others to allow a more elaborate Motor to be made. These include shaped Pole Pieces, a 3-pole Armature, a Commutator, & 3 different Coil Cores. The 2 Flanged Plates in the Set are said to be painted green and the Pole Pieces & Rotors, red; the steel Strips are brass plated. Both a Nr.3 & a Nr.1 Manual are included and it is explained in the Introduction to the Nr.3 that it is an addition to the Nr.1. The Nr.3 has 12 A5 pages plus light blue covers printed in black. The front (see MCS p1 or 2) has the boy and a Motor driving a pulley made of 2 Rotors (the part of the cover that can be seen in the No.4 Set is similar but not exactly the same). Underneath the illustration it is said that the Set is for various Motors and more than 150 other models & experiments. The Nr.3 manual has only instructions for the d.c. Motor on the cover, plus lengthy explanations of the theory, another similar Motor (below) on p10, and 2 other models on p11.

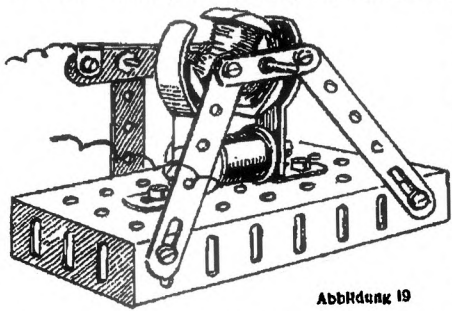
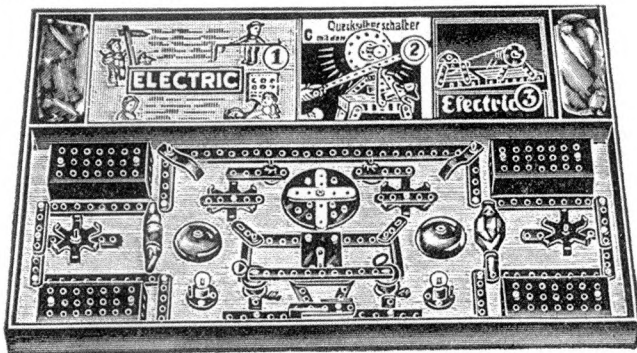


Abbildung 19

Model Sheet. p12 of the No.3 manual has ads for a fretsaw & a tank - both electrically driven and non-constructional.

The page from the Nr.3 manual which shows the Bell & Crane is on p5 of MCS, and above them are two models from p70 of the No.1 manual.

The **ELECTRIC Nr.4 Set** below cost RM.14.50, 3.50 more than the total cost of Sets 1-3, and it is thought that it contained at least all the parts in Sets 1-3. Parts not seen before include the Disc of a little more than 5h Ø, the Bulbs in Holders, and the Switch below the Disc. Some, perhaps all of these would be from the No.2 Set. Manuals Nos.1-3 can be seen along the top and as far as is known there was never a No.4. 250 electrical models were claimed in the ad and these could just about be accounted for by, as is likely, the No.1 being identical to the unnumbered manual already described (the cover is as in OSN 8 with the added circle with '1' in it); the No.2 being like the one in the Walthers ad (with 140 models/experiments); and the No.3 being as described above.

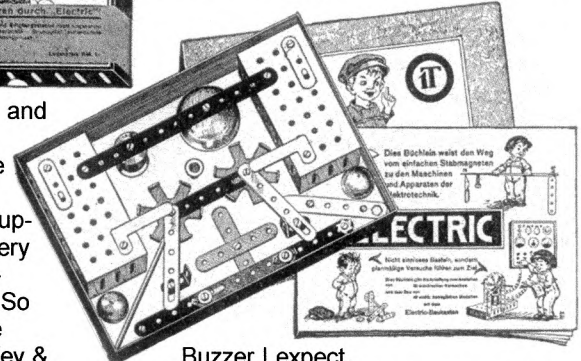


Two other special sets were the 'T' and the '1T' (shown atop the next column), where T stands for Telegraph. The T Set cost the same as the No.1 & some of the wording on what looks like a wrapper around it says, when translated, 'Learn how to telegraph from "Electric"', & underneath '???' a



complete transmitting & receiving station, including a detailed instruction

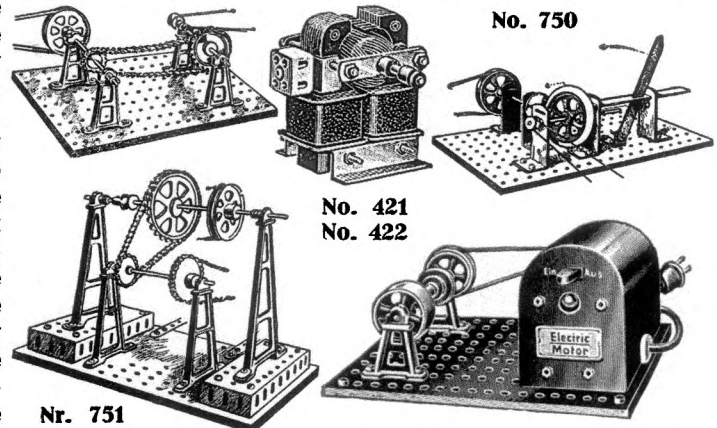
manual and a table of Morse code. Power supply: battery or transformer.' So a simple Morse Key &



Buzzer I expect.

The contents of the **1T Outfit** include the dark 13h Strip, not seen before, and the basic Motor parts.

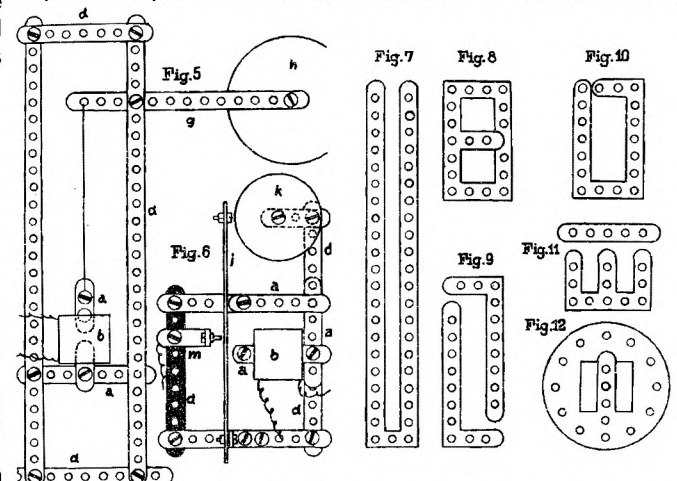
Going on to the **Motors** and pulley/sprocket **Drive Sets**, some are in MCS, and the others are shown below. As well as the cylindrical 411/2 Motor in MCS (the 411 is the 110-**No. 754** 125v version and the 412 is for 220-250v), there



Nr. 751

are two other mains Motors, the 421/2 (top centre), and the Motor Drive Set 441/2, bottom right. 2 of the 5 Drive Sets are in MCS as 'A' & 'B', but are called Nos.752 & 753. The others are 750 (top right) with a friction drive to allow speed & direction to be changed, and 751 (bottom left) & 754 (top left) with Chain drives.

HISTORY The English & French patents for **ELECTRIC** (Nos.395129, 736901) are in the name of Eduard Hoffmann of 13 Grundstrasse, Oberlosnitz, Dresden. The complete Nr.1 Set is shown packed in a box, together with a number of strips elements to be used in various electrical assemblies. The latter employ 1 or 2 coils, and are intended for use in models of a transformer, a bell, a railway signal, etc. A railway signal & a bell are shown below, together with the special strips. As far as is known none of the latter were

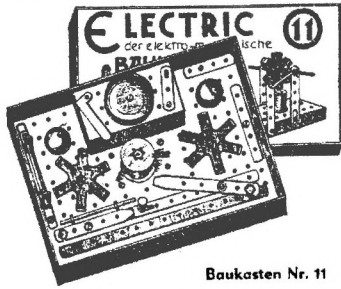


ever produced. The convention date is 11th May, 1931, and *Baukästen* gives the dates for **ELECTRIC** as 1932 to about 1970. So it's possible that **ELECTRIC** was on sale before the Walthers 1933 ads. Initially there may have been only

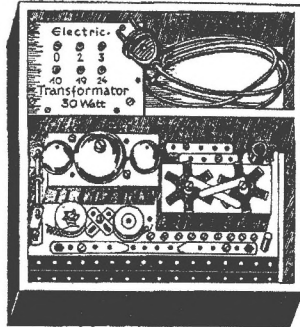
the basic set (as in the Patent), witness the manual cover with no number on it.

Baukästen gives the first maker of ELECTRIC as Böhmert, Hoffmann & Co. of Meißen (the Hoffmann of the Patent no doubt, Meißen is near Dresden) from 1932 to 1940. Thereafter came "Electric" Böhmert & Helm (1941-49), and finally VEB Mewa Mesco-Werk Meißen.

ELECTRIC Nr.11 & Nr.16. Going on to the postwar phase, a flyer with no indication of maker, but probably from Mewa, shows the 2 sets below. On its back are 11 notes



Baukasten Nr. 11



Baukasten mit eingebautem Transformator Nr. 16

about the sets and suitable power supplies for them (4 to 8v from batteries or 6-10v from the recommended 24v No.91 Transformer). The **Nr.11 Set** is probably the same as the No.1, or nearly so, and includes the basic Manual for 100 models/experiments, plus a Model Sheet with only the prewar mechanical models. The example of this Sheet known is headed Mewa, and the models are still numbered 48-123. The lid may be red & yellow – a rather similar one, red on yellow, with the models on a red ground, can be seen in *Baukästen*, p103 (though why it is on a Nr.16 lid is a mystery). A Mewa manual is the same as the basic prewar one previously described, except: the covers (the front one is shown below); some changes to



the text on pp68 & 69 (if I've underood aright, the Motor speed, 1000 rpm, was wrongly given as 500 rpm in the earlier version); and it has no page showing the Parts & Contents. No copyright date is given on p80, and the PR on the back cover is (LMe6)

1605 10000 2517. The PR of another manual, identical except that it has the Parts/Contents page, is (LMe6) 3335 5000 9104.

The **Nr.16 Outfit** contains about twice as many parts as the Nr.11, so more than one model can be made at the same time. It is packed in a wooden box with a transformer (similar to the No.91) built into the top section, and has the same Manual & Model Sheet as the Nr.11. The Set in *Baukästen* is in a light green-blue box and the parts that can be seen include 2 light blue Flanged Plates, 2 Coils, 2 red Rotors, a round white plastic Bulb Holder, and other Nr.11 parts. The Transformer has a fawn top with 6 output tappings from 0 to 24v (as on the side of the No.91). Also in the photo are two 9*18h Flanged Plates (23*12*0.7cm) with no holes in the flanges, and made from strong (impregnated?) card. They look like the Bases in the Drive Sets but it is said that their hole pitch is only 12mm so they do not quite match the standard parts. The black one was found in the Nr.16 Set and the blue one in a mixed lot which included some ELECTRIC parts. It has been suggested that they may have shrunk with time.

A photo of another Set with a Nr.16 lid label just like the the Nr.11 in *Baukästen*, except for the set number, shows the parts in a blue card box, yellow inside, and their layout looks virtually the same as that in the 1937 No.1T. The box is shallow and certainly couldn't house a Transformer.

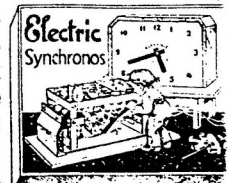
The **ELEKTRIK** box in the next column, with nothing in it, was sold on Ebay last year & it's possible that it is from the ELECTRIC stable. It is in colour on a yellow ground, with

Elektrik in blue & Experimentierbaukasten in red. I can't decipher the wording along the bottom, or the diamond-shaped logo to the right of it, but the boy is the familiar prewar figure (not used in the Mewa era). I've not seen a number of the parts shown on the lid in any ELECTRIC illustrations though, the bridge across the Coils in the Motor, for instance, & its wooden Base.



Postscript: ELECTRIC in 1936 The product range for this year is given in a brochure comparable to the 1937 one already mentioned, although it has a few more details of the various items.

The **basic sets** are the same as in 1937 but a Set, **No.301** (right), to make a Synchronous Clock, is also shown. Its box was 34*25*11cm and at RM.7.50 it cost more than any of the sets except the No.4 (RM.14.50). The No.1T is marked as new. A manual is listed for the No.1 Outfit, and though it is called 1B, its price, and numbers of pages & illustrations, correspond to the No.1 Manual described earlier. The dimensions of the boxes for Sets 1T,2,3,4 are given as: 25*16*3.5; 33.5*25*3.5; 28*21.5*4.2; 58*39*4.5cm.



Drive Sets A,B,C,D are listed, replaced by Nos.750-754 in 1937. Of the lettered sets it is said that each can be used by itself to make several models, or can be combined with the others, and with the standard sets – a Manual with 31 illustrations is mentioned.

Set A includes a large Flywheel, (120mm Ø, 400g), a Base Plate, Rubber Feet, 4 Shafting Standards), Pulleys, Cone Pulleys, & Rubber Driving Bands. The box top (as in MCS) is said to show a Set A model. This Set may be similar to the 1937 No.752, although it may also have included Strips etc, if the Crane on the lid can be made with it. **Set B** seems to equate with No.753 and includes Fixed & Loose Pulleys, 4 Shafting Standards, Rubber Driving Bands, & a Base Plate. Also to be seen in the MCS & No.753 models are a lever-operated Fork Unit to move the drive between the Fixed & Loose Pulleys. **Set C** has Sprockets & Chain and can be used for a Winkelgetriebe (angled drive). Other parts in it include 4 Pulleys, a Base Plate, 6 Bearings, & Rubber Driving Bands, and it doesn't appear to correspond to any of the 1937 sets. **Set D** has parts for both pulley & chain drives and is probably similar to No.751. Among its parts are 3 Base Plates (including no doubt 2 of the small Flanged Plates), 4 Large Shafting Standards, 3 Sprockets, & 2 Pulleys. The A,B,C,D **boxes** are all the same size, 34*25*4cm. The **parts** are said to be lacquered, and made of non-porous cast iron. Wheels are turned & bored 4.1mm.

Motors All the 1937 ones are listed except the unenclosed No.421/2. They include the Motor Drive Set (441/2) and (omitted in error from the 1937 account) a Motor (No.111/2, below left) which is the 441/2 Drive Set motor but with the case extended to house a 1-24v transformer. Both these items were marked as new in 1936. The 1936 Motor below right was not listed in 1937. It has a controller on the right and a pulley reduction drive between the motor output shaft & the pulley running in the end holes of the horizontal strips. The Lamp Unit was optional and the bulb over the induction coil would light when near the Motor. Without the Lamp it was No.401/2; with 403/4.

Nos.111/2 & 441/2 are induction motors - there's no room here for the other details given, such as size, speed, power, but all are in the Extra MCS Sheets.



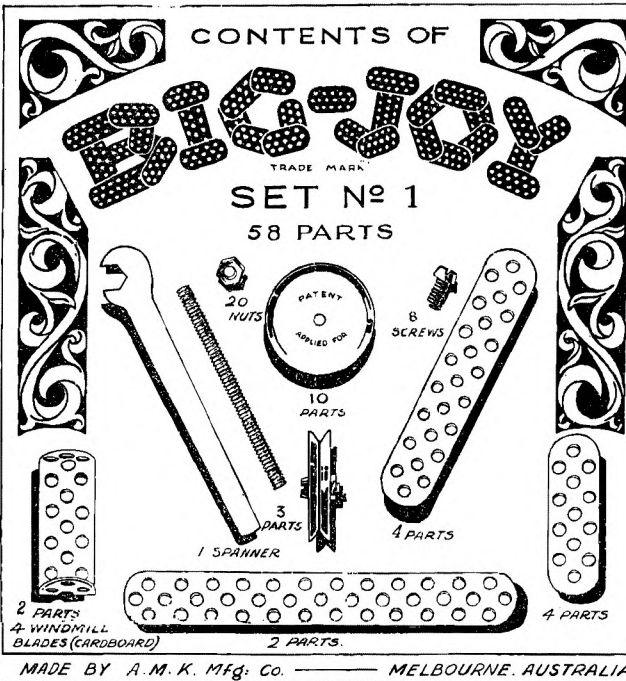
BIG-JOY The name of this prewar Australian TRIX copy was mentioned in 23/682, and now Tony Press has very kindly sent a photocopy of a Model Sheet for 'Set No.1', and a photo of the restored parts from such a set, both courtesy Jack Little. The panel opposite, from one side of the Sheet, shows the trade mark, and has 'Patent Applied For' within the Pulley Disc. Also, at the bottom, the manufacturer in Melbourne. Nothing is known of sets other than the No.1.

The Parts All but 3 of the parts are shown opposite. With one or two exceptions all look like TRIX - Strips with 5, 9, & 13 holes along the centre line; a DAS made from a 7h Strip; an 8h Wheel Disc; a Threaded Rod about 55mm long; and a Span'driver, though to the original TRIX pattern with no holes along the handle.

The parts that are different are the Pulley Disc (in the Panel) of about 30mm Ø; the card Windmill Blades which scale at 1½*2½"; and a Rubber Ring to fit the made-up pulley. Bolts are cheeseheaded, shown with a taper in the Panel, and the Nuts hexagonal, perhaps a little larger than in TRIX.

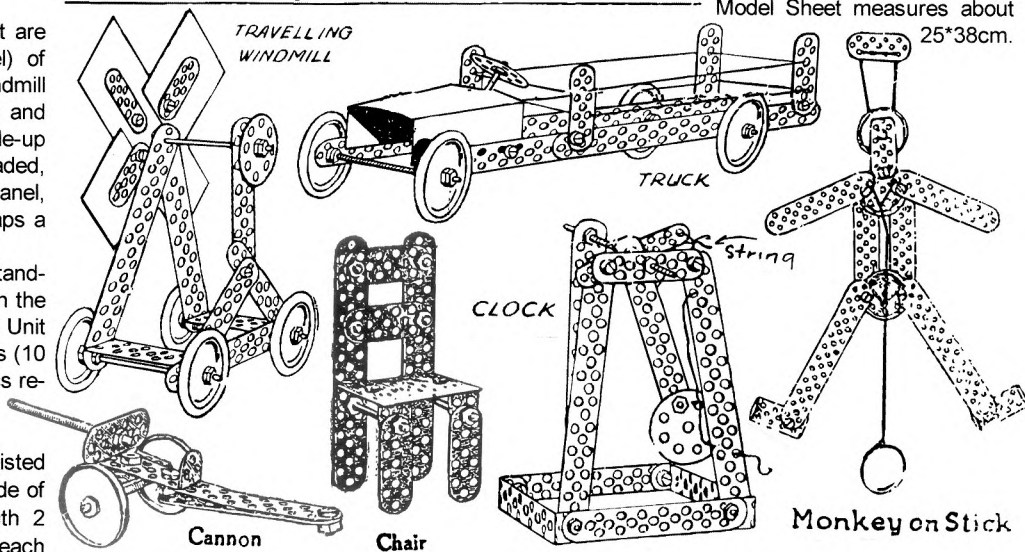
The Contents of one standard of the No.1 Set are given in the Panel. It is equivalent to a TRIX Unit A except that it has no Washers (10 or 16mm), & the 10 Pulley Discs replace 4 Wheel Discs.

The contents of what is no doubt a latter version are listed at the bottom of the reverse side of the Sheet: 64 parts in all with 2 fewer Pulley Discs, but plus 4 each



Wheel Discs & Rubber Rings. **The Set** is said on the Model Sheet to be packed in a handsome presentation box. **Models** Some look familiar but not all. 7 are on the 'reverse' side of the Sheet under the heading 'MORE BIG-JOY No.1 MODELS', and all but one are vehicles running on the Rubber Rings. Only 4 of the 23 models on the 'Panel' side have wheels and none tyres. Wheel Discs are used in only 5 models, & 2 of them are on the Panel side. Card is used in few models, perhaps in some cases the Windmill Blades. Several models need more N&B than are in the Set. The models below are some of the larger ones, & show the various parts.

The printed area of the Model Sheet measures about 25*38cm.

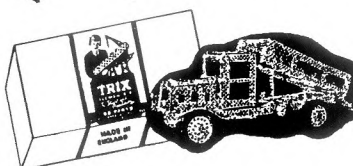
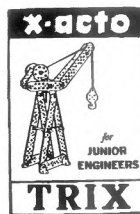


TRIX in the U.S.A. David Hobson kindly sent details of material he has received from Rodney Nebocal, via Anton Calleia, and it's now possible to put an approximate date to the X-ACTO TRIX System, see 12/331.

First though, before X-ACTO, TRIX sets were advertised in Trix Train brochures for 1946, 1947 & 1948, as being available from the New York store, Polk's Hobbies Inc. 6 items were listed, Units A,B,C,D at 60,60,65,95c respectively; an Elementrix Set at \$1.25, & a Motor Trix Set at \$8.50. Made in England can be seen on an Elementrix set in the ad (right).

The X-ACTO ads are from a 1950 X-ACTO catalogue and show Units A & B at 50c each; C & F (2 of each Tyres) at 75c; D at \$1; E (Electrical) & G (Gears) at \$1.25. Unit G is illustrated below and the box has 'REFILL UNIT G' on it, the term used for the Units in the OSN 12 Manual.

3 of the Sets listed are those described in OSN 12 (Nos.702-704). No.702 is shown centre right and the description of it includes, '98 pieces highly polished steel fully visible, set on adhesive tape and readily re-moved and replaced'. 4 other sets were also available. First, No.702X at \$3.50, with 2 each of Units A & B, 1 each



of C & D, and the 48-page Manual. Next the largest set, No.706 at \$25, with 590 parts including 72" of Chain, 2 small & 2 large Tyres, a Motor, and the 116-page Engineering Manual, in a 'portable chest'. Then at \$3 a Tray (No.700) 'containing one each of all parts, beautifully displayed, together with Built Up Crane'. This was presumably for dealers and as well as the individual parts, illustrations of the Units, except E, are included, which show all the parts in each, as in pp3/4,a of TRIX (1) in MCS. Finally an ELEKTRIX Set, below, No.711 at £3.50, containing an A, a B, & 2x E Units, plus a special manual. The ad speaks of 'The new Unit "E" here introduced for the first time in America'. The Trix man logo on the sheet with this Set is shown above (top left), with the Crane logo used on all the other X-ACTO material to its right.



A Little More about THALE STAHLBAU TECHNIK

Since the notes on this East German system (54 parts, with a few unusual ones; 4.2mm holes at 12.5mm pitch; M4 N&B) in 8/174 & 15/419, several manuals from 1960 to 1967, and some other information, have come to hand from various sources. Thanks are due to Thomas Morzinck & Clive Weston for their contributions.

Per *Baukästen* the sets were made from 1946 to 1975: first, until 1961, by Thaler Blechwarenfabrik Krause & Co.; then, until 1972, by the same company but with 'KG' (Kommanditgesellschaft = limited partnership) after the name; & finally by VEB Metallspielwaren Thale. The dates given below are mostly taken from the last digits of PRs - this is an assumption but it seems to give a coherent sequence.



MANUALS Two types have been seen. One has models for sets 1-3, and the cover above (as in MCS) is in full colour on a green ground. Some of the models are in colour too and all are shown against a 'real' background drawn in orange. The second, for Set 1, is in B&W, with no 'scenery'; it has no proper covers, the first page is the Intro page from the 1-3 version. The PRs of the various manuals seen are listed at the end. The 1965 1-3 and the 1963 Set 1 Editions are described below - the small changes in the others will then be noted in what follows.

SUMMARY OF MANUAL •Name: Thale STAHLBAU TECHNIK
 •Details of maker: THALER BLECHWARENFABRIK KRAUSE & CO, THALE/HARZ. •Dates &/or Ref Nos: III/18/2-26750 P 205/65 on C3.
 •Page size: 284*197mm deep. •No. of pages: 28+covers. •Language: German. •Printing: covers & some models in colour; most models have 'real' background in orange. •Page No. of Illustrated Parts List & highest PN: 3,54. •Page No. of Set Contents & highest PN: 2,54 (51-54 not in sets). •Sets covered: 1,2,3. •No. of models for each set: 17,14,7. •Name, Model No., Page No. of first & last model of each set: 1: Sackbarre,3,7; Krankenstuhl,4,12. 2: Windmühle mit Hammerwerk,38,13; Doppelständer-Kurbel-presse,54,C4* 3: Fahrbare Verladebrücke,29, C2; Motorisierte Feuerwehrleiter,28,C3. •Other notes: • The models aren't in order. The last model before the back cover is Einfacher Drehkran,52,26 for Set 3. • On p25 is No.25, Karussell "Spinne" which needs Set 3 & extra parts. • Standard Constructions are given on pp4-6 & experiments in mechanics on pp27-28. • * The Set/Name/Model No./Parts List of this model are given in the 1960 Edition but in none of the later ones.

The **Set 1 manual** has 8 pages, all similar to the 1-3 manual above. After the introductory page, the Set Contents, & the Illustrated Parts, the final 5 pages are the No.1 model pages 6-11 from the 1-3 manual. The last model is No.9, Elektrokarre.

In the manuals through 1965 only one manual, price Pf40, is listed; thereafter 2 are shown: one in colour at Pf83 & one in B&W at Pf10. If these last are the two types described here, the coloured version was available by 1960.

PARTS No new ones were added during the period. One part, #55 *Kurbel f. Spinne*, was listed as a part in the Set Contents through the 1965 No.1 Manual, but was never included in any Sets. It isn't illustrated: an ordinary Kurbel is a Crank Handle & #55 may have been a special cranked part used to give the necessary offset to the spider at the top of the Spinne model shown in MCS (a 6-car 'Octopus' Roundabout). The same illustration of this model, which needed Set 3 plus extra parts, was in all the 1-3 manuals and probably an ordinary Kurbel could be used instead.

The **25mm Axle** is marked 'Zinken für Egge' (Tines for Harrow) in the 1960 manual, but not thereafter, and there is no Egge

models shown. Perhaps it was in an earlier Edition.

In certain years the **Gears (#51-54)** were marked in the Parts List as not being available.

The **colours** of the parts are generally similar to those noted in OSN 8 except that in the earlier sets the Strips are black, painted according to BK. The Gears were moulded in a dark brown plastic that looked like Bakelite.

SETS On the back of the 1960 manual it is said that 3 **linking sets**, 1a, 2a, & 3a, are available - the last is to convert a No.1 into a No.3. (Actually Roman numerals are used, as they were elsewhere from time to time.) No mention is made of linking outfits in later manuals.

The only change to the **set contents** was that the number of 25mm Axles in Sets 2 & 3 were reduced from 13 & 15 to 6 & 12 between 1960 & 1963. At some time after 1967 2 Gears were added to Sets 2 & 3, as shown in MCS, but oddly, although the sets are progressive in all other respects (except the Tyre pattern for the 26mm Pulley), the MCS Set Contents shows a 20 & a 40t Gear in Set 2, and a 20 & a 60t in Set 3. The Worm wasn't included in either.

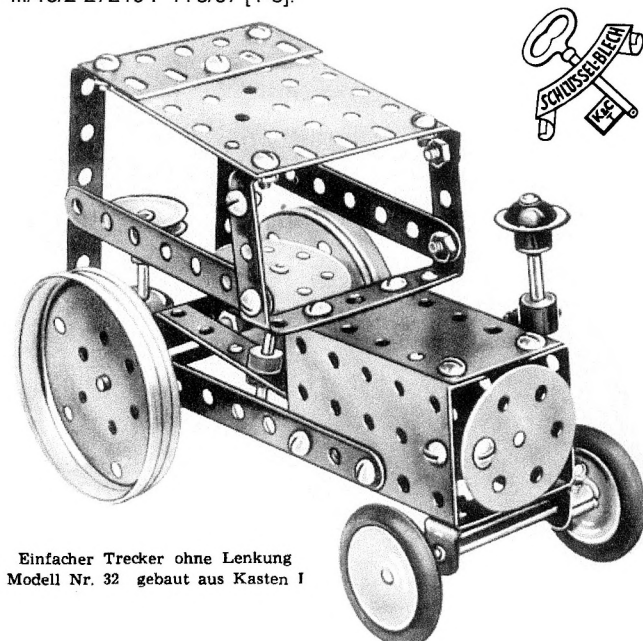
A **Gears Outfit** is known from 1961 and all four Gears are shown on the lid label opposite (45% full-size). The PR at the bottom is IV/18/15 1201 Pn 701/61. The name of the company has the KG after it - this was never added to the name on the manuals.



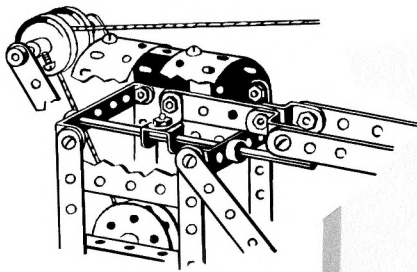
Photos of two sets from this time show them packed in dark mottled boxes, lighter inside, with partitions to separate the parts. The lid label is very similar to the manual cover. A No.1 of unknown date is in a red box with partitioning, and has the later type of Gantry Crane label shown in OSN 8.

MODELS Those for Set 1 are mostly reasonable looking, typical small models - the Tractor below is among the best. Many for Set 2 are machine tools or agricultural implements, plus a few vehicles, and the Digger at the top of the next page. Again most are attractive looking. The No.3 models include 3 fair Lorries with centre-pivot steering, a better Fire Engine with 2-stage ladder, 2 decent Cranes, and the Big Wheel in MCS. All the models are quite simple though with mechanical features confined to the simple steering and some Pulley drives. The only exception is the 'Octopus' special model, also in MCS, which uses the Gears, but even then there seem to be two separate drives, one to rotate the arms, and the other to the eccentric to raise/lower them.

Manual Ref. Nos. III/18/2-24629-Pn 509/60 [models for Sets 1-3]; III/18/12 . 26006 . P 573/63 [1]; III/18/12-26541- P 205/65 [1]; III/18/2-26750 P 205/65 [1-3]; III/18/2-27047 P 261/67 [1]; III/18/2-27219 P 773/67 [1-3].



Einfacher Trecker ohne Lenkung
 Modell Nr. 32 gebaut aus Kasten I



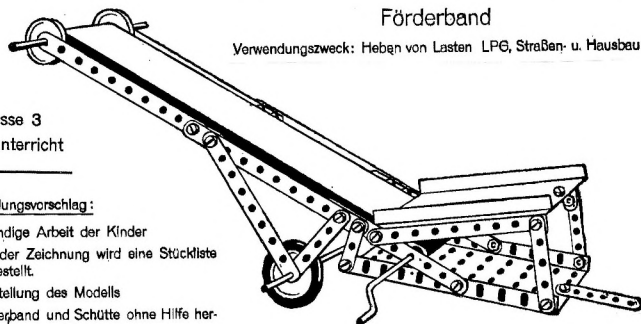
LATER The 1972 OSN 8 No.1 was in a purple mottled box with white moulded packaging. The 1973 Set was similar except that the box was blue. Also its label did not carry the Krause key logo - by that time the company had been nationalised.

A new design of lid top (below) has been seen in photos of Sets 2 & 3. The ground is yellow & white, with the same Crane as before but with 3 stylised doll-like children. It's rather charming but would it have appealed to budding young engineers? Perhaps it was intended to attract East German mums. Judging from its appearance it came after the 1973 label but the key logo can be seen in the bottom small circle. Possibly this design was only used for the larger sets, and was introduced before 1973. There are much clearer photos of this type of lid in BK (p124) & EZ (Pl.67), and in the former it can be seen that there's no 'key' in any of the circles. In the with 'key' Set below the end holes in the 5*5h Plate are elongated, but in the BK 'no key' Set they are oversized round holes, as in the 1972-73 No.1 Sets. In all three 'doll' sets the Gears look to be white. As far as is known the design of the manual cover was never changed.



Another Krause System METALLBAUTECHNIK

Details are given in MCS - this was a set intended as an instructional aid for 'Werkunterricht Klasse 1 bis 3'. All that is known of it is a folder, 220*157mm deep, with 11 cards inside, 10 with page numbers 1-20, and the other with just 8 Road Signs printed in colour on it. All the 28 parts are illustrated and though many of them

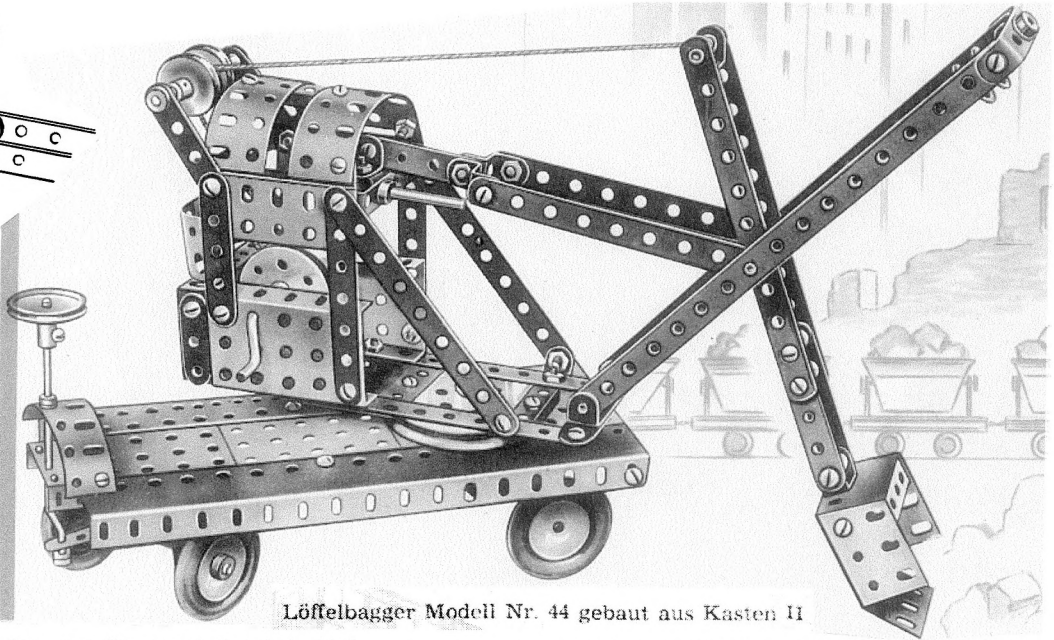


Förderband
Verwendungszweck: Heben von Lasten LPG, Straßen- u. Hausbau

Klasse 3
Werkunterricht

Anwendungsvorschlag:

- Selbständige Arbeit der Kinder
1. Von der Zeichnung wird eine Stückliste aufgestellt.
 2. Herstellung des Modells
 3. Förderband und Schütte ohne Hilfe herstellen und anbringen



Löffelbagger Modell Nr. 44 gebaut aus Kasten II

could be, and probably are, STAHLTECHNIK parts, a few are clearly not, in particular a 5*11h Flanged Plate, and a Hinge. Two of the Axles are different lengths too, at 60 & 100mm. All that can be said from the details given is that the Axles are 4mm Ø, and the thread is M4. The Set Contents are given and include 34 Strips form 3 to 11h, 4x 26mm Pulleys with Tyres, and 22 M4 Bolts.

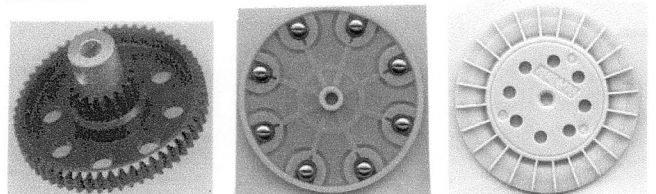
14 models are shown after some 'Basic Constructions': the first are Frames, with & without bracing, on p7, and the last is the Conveyor in the previous column. For that the children had to decide what parts were required (for most models the parts needed were listed), and build the model, including making the belt & chute (from unspecified material) without help. The other models include Steps, Barrows, a Set of Scales, a Braced Gate, a Stand for the Road Signs, & a Crane. The latter needs 2 Sets, as does a Cable Railway shown on the back of the folder.

From the PR on the back of the folder, P 321/70 IV-25-3, the date would be 1970, and the KG is there after the company name, as would be expected.

Some JE-IL (JEP) Parts Geoff Wright kindly showed me the 4 parts described below; they were illustrated or mentioned in 13/344.

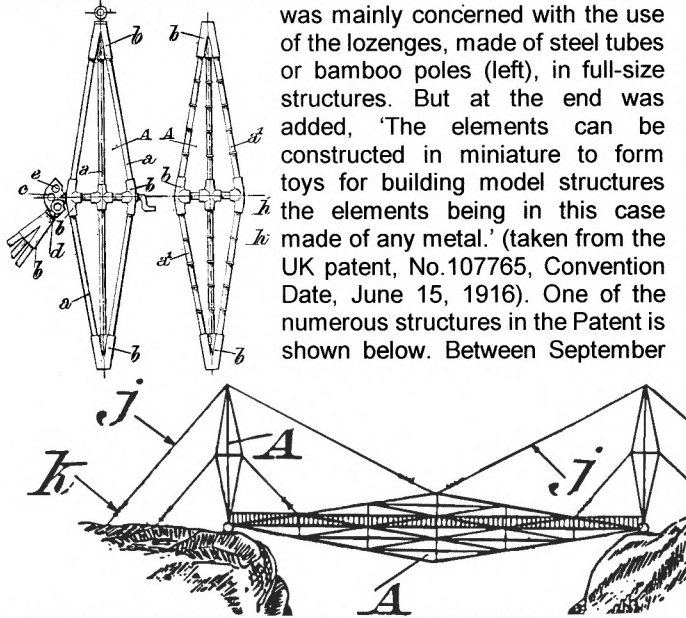
The **Gusset**, #131, is a thin, rigid steel plate, .70mm thick, painted a mid-green. The **Steering Bracket**, #133, is made from 1.18mm steel with an iridescent finish. The **Combined 1/2" Pinion/1/2" Gear** (below) is black plastic with a brass boss mould in, and has 19/57 teeth. The boss is double-tapped, .374" Ø, with a bore of .164". The pinion's face is 1/4" wide and the gear's is .20". The gear disc has 8 holes in it and its inner side is recessed. The **Ball Bearing**, #110 (below), is now made of yellow plastic, and is 62mm Ø. 8 balls, 9/32" Ø, are held trapped in the centre part, and it doesn't have the ring of 8 holes shown in OSN 13. The two outer parts are identical, with a ring of 8 holes at 1/2" radius, and 24 radial stiffening ribs around the circumference on the outward side. The overall depth of the unit is 15 1/2 mm.

The parts look well made and finished but there are some criticisms: the bends in the Bracket are not quite at 90°; running the Combined Gear with MECCANO parts gives the impression that the JEP part might have a tight mesh with a similar JEP Gear; and the dimensions of the Ball Bearing parts mean that the axial load is being partly taken largely by the plastic faces rather than solely by the balls.



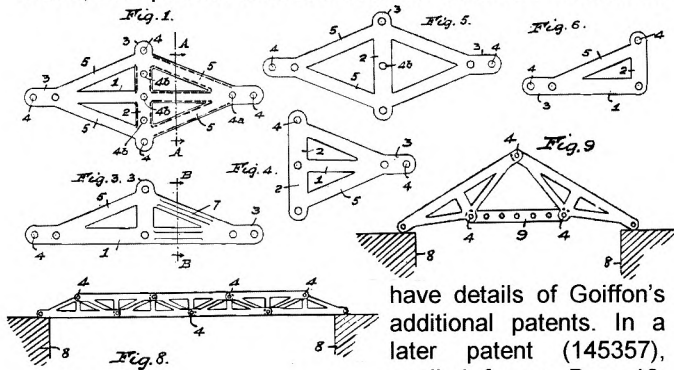
CONSTRUCTOR This rather elegant French system is the earliest to bear the CONSTRUCTOR name; it started in about 1916 & production ceased in 1964. Its novel feature was structures made of lozenge-shaped elements, & though their role reduced with the years, they were retained until the end. This account is based on material contributed by a number of readers, & also draws on articles by Jeannot Buteux/Constructorama which appeared in Issues 50 & 52 of the 'Magazine du Club des Amis du Meccano' (MCAM).

The PATENTS The idea of using lozenges in constructional toys was first patented in 1916 by **Paul Goiffon** of 6 rue Nouvelles Maisons, Lyon. The patent, No.491.527, was in Classe VII/I, Matériel et Outillage, and was mainly concerned with the use of the lozenges, made of steel tubes or bamboo poles (left), in full-size structures. But at the end was added, 'The elements can be constructed in miniature to form toys for building model structures the elements being in this case made of any metal.' (taken from the UK patent, No.107765, Convention Date, June 15, 1916). One of the numerous structures in the Patent is shown below. Between September



& November 1918 Goiffon applied for additional French patents Nos. 20.829, 20.837 & 20.840 (in Classe XX/I, Jouets). Details of these are not to hand but they included a simplified version of the lozenge suitable for toys.

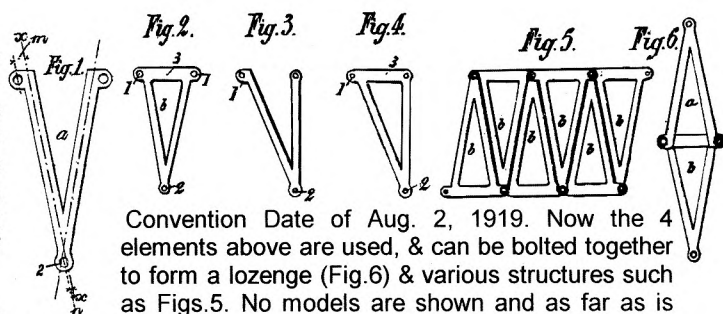
A few other toy patents followed. **Hornby** was granted No. 116370, Application Date June 15 1917 (15 days before the Application Date of Goiffon's UK patent), and in its final version Goiffon's method of fabricating lozenges from tubes was mentioned, but Hornby's claim was for the elements below, stamped out of sheet metal. It would be of interest to



have details of Goiffon's additional patents. In a later patent (145357), applied for on Dec. 16,

1919, Hornby described the 1/2-lozenge with joggles which was to be produced as the Girder Frame, PN 113. No great structures were envisaged in Hornby's patents, just the Bridge & Roof Truss shown above. It has been said that Meccano sued Constructor and lost, but when and over what isn't known.

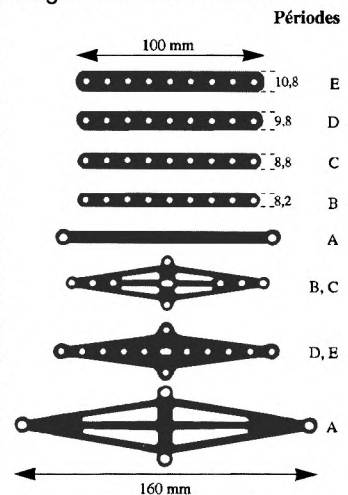
The other 2 patents were granted to **Charles Fregonara**, an Italian living at 24 rue Lanterne, Lyon. The UK version of the first, No.149680, Convention Date July 25 1919, shows lozenges built up from 1 special member & 2 strips (left). The UK version of the second, No.149916 (the French original is No.502.192), has a



Convention Date of Aug. 2, 1919. Now the 4 elements above are used, & can be bolted together to form a lozenge (Fig.6) & various structures such as Figs.5. No models are shown and as far as is known none of these parts were ever produced.

Constructor claimed French, American, Swiss, Austrian, Belgian, Italian & Czech (but not British) **foreign patents**, with their numbers, on the cover of an early 1920s manual. The only one to hand is the U.S. No.1298927 and it covers the same ground as the UK one, but without the examples of structures made with lozenges, and without the mention of a possible application to toys.

The SYSTEM Considerable changes to the parts were made during its life and the CAM diagram below shows the various Lozenges & Strips, in what have been called Period A to E. Other parts varied too, notably the Braced Girder, many parts were added, and there were many minor changes, with for example, some 10 known variations in the 22mm Ø Pulley #28 in Periods D & E alone. The system grew in size from 16 metal parts originally to about 80 after the mid to late 1930s. The larger sets increased in size a little and some smaller ones were added, but they mostly didn't have any Lozenge parts, and finally only the two largest sets included them.



The **holes** in Period A were 4.2mm Ø (with some up to 5mm) and were only at the ends of the parts. After that they were 3.2mm Ø at (usually) 11mm pitch; **Axles** were 3.0mm Ø; and the **thread** was 3mm x .75mm pitch.

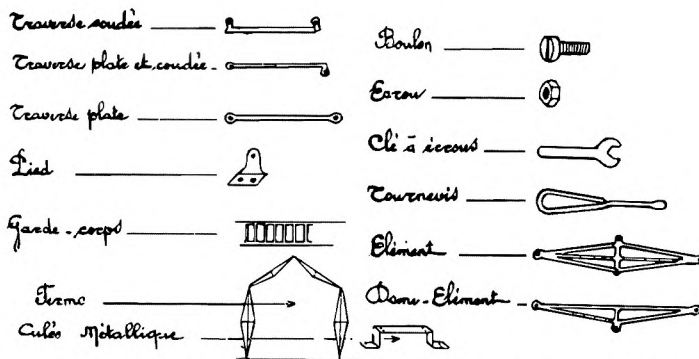
Initially the **quality** and finish of the parts was not too good but they improved afterwards and have been said to be comparable with MECCANO.

Very little CONSTRUCTOR material is dated and that to hand doesn't usually allow the precise timing of changes to be known. What follows therefore are snapshots of the system at various approximate dates. Details of some manuals are given but there were apparently many different editions.

Until recently little was known of the **firms** that made CONSTRUCTOR but some details have now been unearthed and are given at the end of this article. Those relevant to this account are: production was originally at 19 Quai Arlong, Lyon; it was continued by the Société Française du Jouet Métal (SFJM), of 119 Rue de Sèze, Lyon, founded in 1920; and in 1925, with a change of ownership, was moved to Paray-le-Monial (PIM), a town 100km north-west of Lyon. The postal address was then simply CONSTRUCTOR, Paray-le-Monial.

1917-18 This is Period A. Every CONSTRUCTOR box lid, and every manual cover, bears the claim 'Grand Prix / Concours Lépine', and some early ones add 'Paris 1916'. It is supposed that the award was for CONSTRUCTOR and that sets would have been on sale from about 1917.

There were 5 sets, Nos.1-4 & a Boîte Spéciale, but only one, a No.1, is known. The following details are from MCAM. The parts comprised 16 in steel, with all but the N&B painted black, plus 10 of wood, card, or fabric. Most of the steel parts are in the Set 1 Illustrated Parts at the top of next column - the only Strips parts are the three shown. The non-metal parts may have been similar to those in the next phase. The 'Braced Girder' (Garde-corps = Railing) was 455mm long and had no holes for N&B at all - it was used in



Bridges (as in the one from the Patent shown earlier) & other structures, and in one model as a ladder.

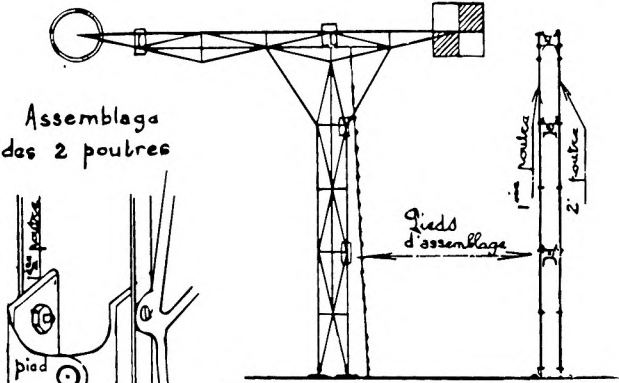
The **box lid** has the boy in the sailor suit with the Tower & Hangar, as in the 1920s version shown later, but they are not in a circle, while to the right is a Suspension Bridge with under it, the Signal Gantry model shown below, and some of the parts. The main wording is CONSTRUCTOR // Jouet de Luxe et de Précision à Combinaisons multiples // LE RÊVE DE L'ENFANT // Invention et Fabrication Françaises.

The **manual**, unlike later ones, was in portrait format (136*213mm), & the main wording on the plain cover was CONSTRUCTOR // Jouet de Luxe et de Précision // INVENTION ET FABRICATION FRANÇAISES // Dessins de la Boîte No.1. The Signal Gantry is one of the models, and others included structures in the original patent, barely changed.

INSTALLATIONS pour CHEMINS DE FER

Potence pour signaux

Vue de Face Vue de Côté

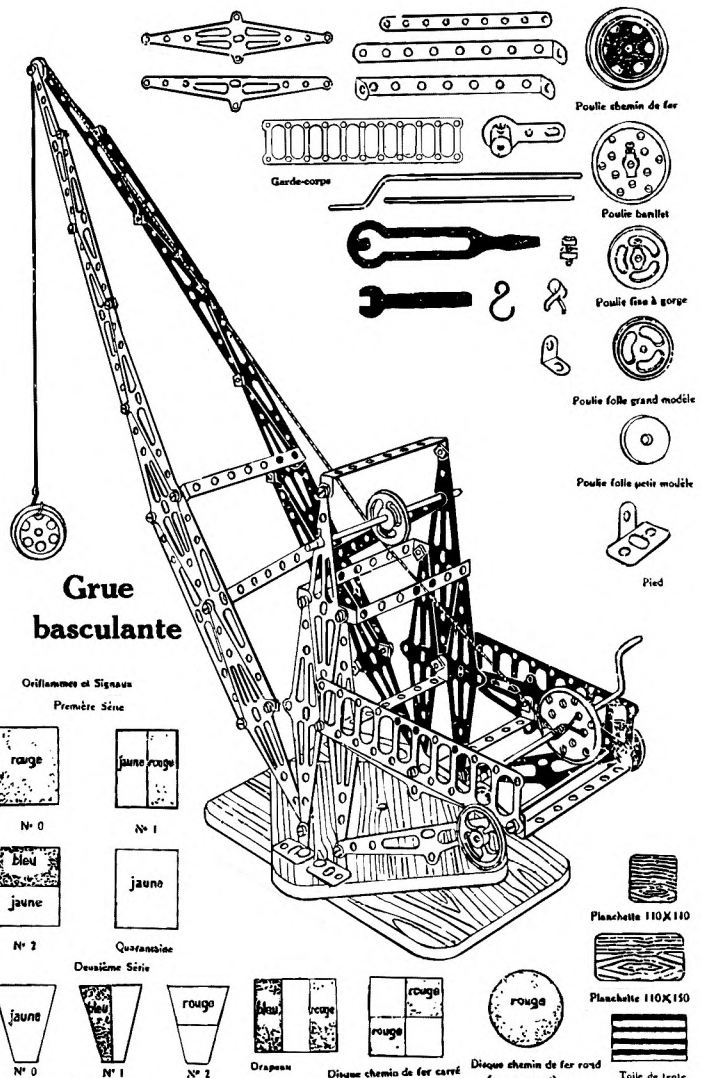


- 8 Éléments 4 Traverses plates
- 14 1/2 Éléments 8 Pieds d'assemblage
- 32 Bouillons

At this time the system had no moving parts, and even in terms of structures it was rather limited because of the few parts available that could be used to join side frames made from the Lozenges.

The EARLY to MID 1920s By about 1920 the system had been totally revised and enlarged. **The parts** from the first (SFJM) manual known from this time are shown atop the next column, with the metal parts above the Crane and the card & wooden ones below it. The Axles are 2, 4, 10, & 13cm long, and the Bolts, 5, 6, & 10mm u/h. These parts are the ones shown in MCAM & MCS/FB. The Flanged Wheel has a pulley groove but although the Bush Wheel is described as a 'Poulie barillet' it isn't clear from various illustrations that it is grooved. The Wooden Bases probably had a centre hole. The 26 metal parts were nickel plated steel except the brass Wheels, and, most likely, the N&B. When the wider Period C Strips were introduced isn't known.

Even though new tooling would have been needed for

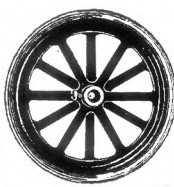


both the Strip parts (still only 3 of them) & the Lozenge, it is surprising that they are not entirely compatible with each other. The holes in the Strips are at 11mm pitch and so are the outer 3 holes at each end of the Lozenge, but the extreme outer holes are at 100mm pitch and the centre slot is not a multiple of 11mm from any of the outer holes. The Braced Girder is 107mm long o/a and the holes along it are at 10mm pitch, so they only match the centre & outer pair of holes in the Lozenge, and don't match any two holes in the Strip. Perhaps to save retooling it was just the earlier Braced Girder with the holes added, and this governed to an extent the design of the Lozenge. In that case though, it would have been better to have had 10mm pitch holes in the Strip & Lozenge. The Braced Girder is 23mm wide and the hole pitch across is 17.5mm, so it doesn't match 10 or 11mm spacing. Although a square Nut is shown, an example, perhaps from this time, is hexagonal, 5.9mm A/F, and a matching Bolt, 6mm u/h, has a tapered CH, 5.3mm Ø. Both are brass steel.

The illustrations of the parts above came from pages headed 'Parts in Sets 1-3', and the PNs run continuously from 1-25. It isn't known if, as earlier & later, there was a No.4 Set at the time. Other pages with them talk of a 'Journal CONSTRUCTOR', & competitions with large prizes, both monthly, with details available from the rue de Sèze address. Also with them, 2 model pages which include the No.2 Crane above. The cover of the manual containing these pages is probably that on p7(a) of MCS/FB and is similar to the one shown below except that the patents aren't listed and the set is indicated by a '2' in a circle at each side.

A **slightly later 0-2 Manual**, though still with the initials SFJM on one page, will now be described. First though the Illustrated **Parts List** that was found with it. After #10 the PNs differ from the earlier one because new parts have been added in. Together with a slightly different Crank, 4 of

the 5 are shown right. In addition the List shows new versions of the Fast & Large Loose Pulleys, & Flanged Wheel, without any holes or cutouts in their faces. The new part not illustrated is #39 'Boules tricolores' and although not listed before, examples could be seen on the box lid Tower even in Period A. In MCAM the part is described as wooden, 25mm Ø, painted red, white or blue, and fitted with a metal hook & ring. Also listed are the range of sets, 0-4 & linking sets 0 bis to 3 bis; **Manuels** Nos.1, 2, 3, & 4; and 2 **Motors**, C/W & 110v Electric.



Roue Auto avec pasti



Engrenage deux tailles, 55 dents



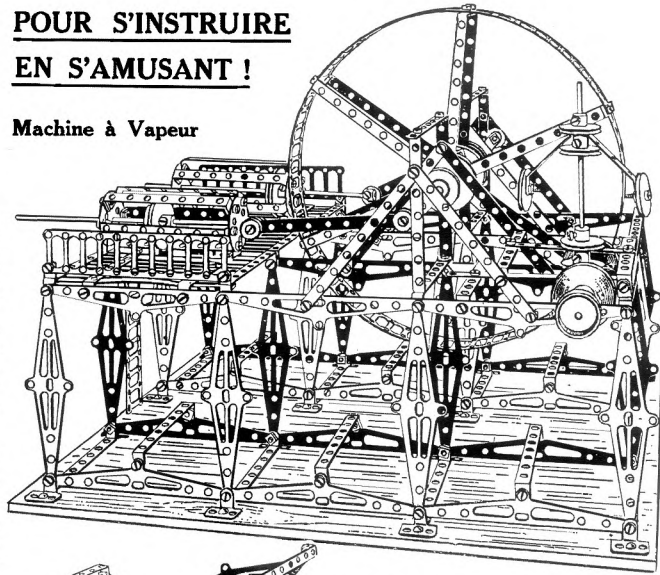
Vie sans fin



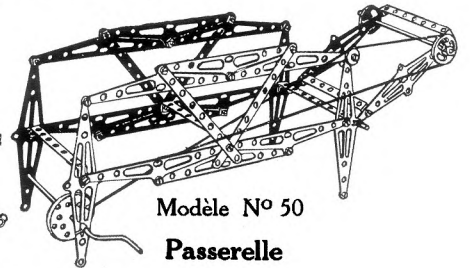
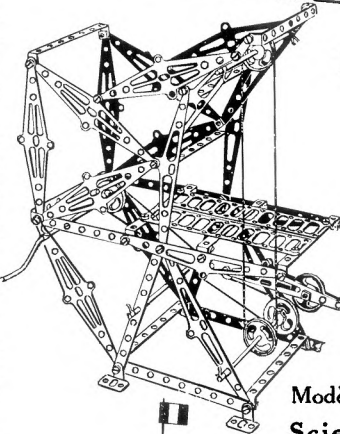
Pignon deux tailles, 19 dents

POUR S'INSTRUIRE EN S'AMUSANT !

Machine à Vapeur



S. F. du J. M.



Modèle N° 50
Passerelle
basculante

Modèle N° 127
Scie à ruban

SUMMARY OF MANUAL •Name: CONSTRUCTOR •Details of maker: S. F. du J. M. on p2. •Dates &/or Ref Nos: none. •Page size: 244*158mm deep. •No. of pages: 32+covers. •Language: French. •Printing: line drawings of models, orange cover with red & black text. •No Parts List. •Page Nos. of Set Contents & highest PN: 29,38. •Sets covered: 0-2. •No. of models for each set: 32, 37, 63. •Name, Model No., Page No. of first & last model of each set: 0: Assemblage droit inverse,1,3; Martin+et,32,7. 1: Bascule, 33,8; Petite Passerelle,69,13. 2: Demi-

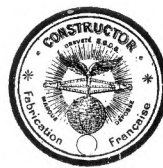
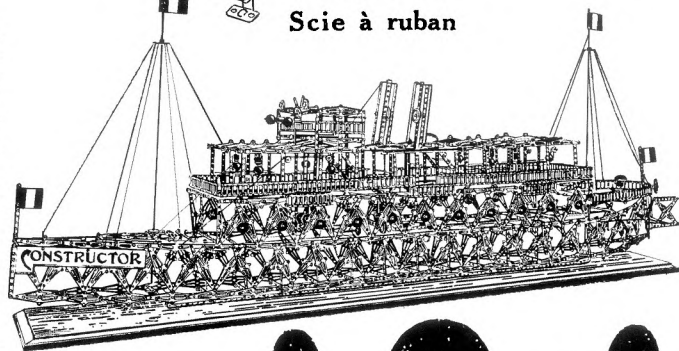


circle,70,15; Hangar en longueur,132,28. •Other notes: large models of a Liner & 2-Cylinder Steam Engine are on pp2,14; pp30-32 & C2,3,4 are blank except for the printer on 30 & C4: A.Ramboz, Lyon & Paris.

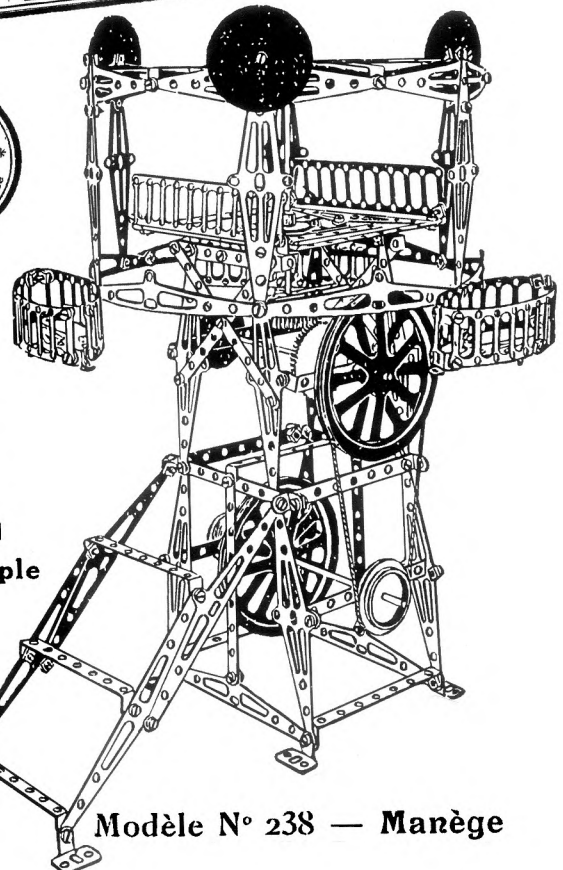
The **Set Contents** shows the main parts in the No.0 are 6 each of the Lozenges & ½-Lozenges, 4 Strips & 6 DAS, 2 Fixed Pulleys, and 25 N&B. 2 more Pulleys, 2 Braced Girders and a Bush Wheel are among the extra parts in the No.1. Of the new parts, 2 Cranks are in the No.3, and all are in the No.4, including 4 Spoked Wheels with Tyres, a Worm, and 2 each of the Gear & Pinion. The other No.4 parts include 32 each Lozenges & ½-Lozenges, 74 of the Strip parts, 10 Braced Girders, and 166 N&B. All the sets have both sizes of Wooden Base and all the 'decor' parts except the Ball.

The 2 **model pages** from the earlier Manual are in this one but with different page & Model Nos. Most of the No.0 models show the simplified Pulleys but a few have the older pattern, as do all the larger set models. No models use the Cranks in the No.2 Set. Some of the models are shown in the next column including the Steam Engine & Liner 'super' models. The Chair is from Set 0, the Lifting Bridge from Set 1, & the Saw from Set 2. Also shown is a No.4 Roundabout from a **slightly later 0-4 Manual** with a cover similar to the one above but brown with red & black lettering. It still has SJFM on one page but a postcard with it is printed with the PIM address.

From photos of Sets No.3 & 3 bis that were with this last Manual details of some parts can be seen. The **Spoked Wheel** is about 7cm Ø and is made like the ERECTOR part, with two 6-spoked discs tagged together with the spokes staggered. The **Tyre** looks as if it is a black rubber ring. The **Bush Wheel** scales at 30mm and has the 2 rings of 6 holes as earlier but the boss is circular without the side extensions. The **Flanged Wheel**, with pulley groove, is about the same diameter, the Loose & Fast **Pulleys** are about 20mm, and the Small Pulley about 10mm. All appear to be brass and as would be expected none have the early cutouts. The **Crank Handle**, **Spanner** & **Screwdriver** scale at 132, 63 & 105mm o/a. Scaling the **card parts** gives 40-45mm for the Railway Signals, & the length of the Flag; 30mm for the length of the Oriflammes et Signaux; and 100*75mm for the Toile de Tente (which has 8 red & white stripes). The **Gears** were



Modèle N° 11
Chaise simple



Modèle N° 238 — Manège

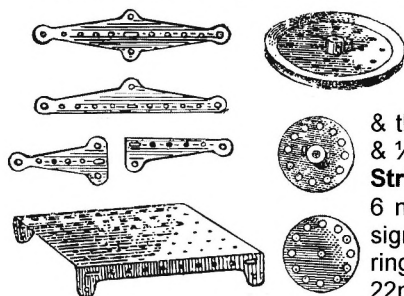
missing but would be brass, machine cut, with the Pinion & Gear Wheel (19 & 55t) bevelled so that they can also run together at 90°.

The **boxes** are black, green inside, and the **lid label**, below, is the design used throughout this period and into the 1930s. It has a fawn background with the two panels in colour and the name in red.



About 1930 This is in Period D & details are from a Leaflet headed 'LE NOUVEAU CONSTRUCTOR en Couleurs', and a Manual of the time. The **sets** listed in the Leaflet are Nos. 00 to 4, and 00 bis to 3 bis, plus 2 others, Baby No.1 & No.2, which still had nickel parts, and cost Fr.5 & 10, against 19 for the No.00. The 2 **Motors** are also listed. The box **lid labels** in the illustrations of the Sets 1-4 are the same as before; those of the 0 & 00 are similar but with the text to the right of the centre panel moved to under the name.

By this time the **parts** and sets in the system had been revised again, and given that the only novelty claimed was the coloured parts, those changes had no doubt happened earlier. No Parts List is available but the main changes, from the parts used in the Manual models, were (with illustrations of those starred):



•The redesigned **Lozenge parts*** with holes that now match the Strips,

& the new End ½-Lozenge* & ¼-Lozenge* parts. • Extra **Strips** with 2,3,5,7,17h, and 6 new SAS/DAS. • A redesigned **Bush Wheel*** with 1 ring of 12 holes on a pcd of 22mm, and a **Wheel Disc***

to match. • A 36cm **Axle**; • a **65mm Pulley*** with a ring of 6 holes at 22mm pcd, and another with 12 at 44mm – this replaced the Spoked Wheel. There may also have been a Loose Pulley of the same diameter– later there was, with discs spot welded together, no face holes, & pronounced bellings at the centre. The **Tyre**, white looking now, was a separate part. • A new 11*7h **Flanged Plate***, flanged on the 11h sides with 'feet' at each corner. • A **Braced Girder** of the same pattern as before but 'stretched' to give holes at 11mm pitch lengthways and 22mm across.

The **PNs** for all the parts now correspond to those on p3/4 of MCS, and the **sets contain** all the parts through #45 except 5b,c,d, 10a, 14a, & 17a. In addition the Square & Round Signal Discs are used in a few models and in one are listed as #62 & 65 (judging from a later List #65 should have been #63).

So a real rethink, with the desire no doubt to make the system more flexible in use, and the models less 'old-fashioned' looking. The feet on the Flanged Plate are an original feature which is often useful, and rarely looks out of place. The introduction of red & green coloured parts would have helped too. It is said incidentally that some coloured parts had been produced earlier but then dropped, and also that at certain times some/all parts were brass plated.

No details of the colour scheme are to hand but for reference the general **post-WW2 colours** were: Strip parts and Braced Girders green; red Lozenge parts, Plates, 22 & 65mm Pulleys, Bush Wheel & Wheel Disc; solid brass

Gears, Flanged Wheels, & 16mm Pulley; brass plated Crank, 2 & 3h Strips, Angle & Double Brackets, & Double Bent Strip.

From B&W photos of the sets in the Leaflet, the Lozenge parts, the Flanged Plate, the 65mm Pulley, & the Braced Girders look dark, and the other parts lighter. In a photo of an actual model (with this pattern Braced Girders but of unknown date) the main parts have the postwar colours.

No **Set Contents** is available but the following can be seen from the illustrations. No.00 had a Flanged Plate, Strips up to 9h long, 2 each of ½-Lozenges, End ½-Lozenges, & Braced Girders, a Bush Wheel & 4x 22mm Pulleys (probably 2 each, Fast & Loose). The No.0 had more Strip & Lozenge parts, and 4x 22mm Fast Pulleys. 4 of the 65mm Pulleys are in the No.1; an extra Flanged Plate, & 2 more Braced Girders in No.2. The No.3 has 4 Flanged Wheels, 2 Cranks, & 2 extra Braced Girders; the No.4 a Worm, 2 pairs of Gears, Tyres for the large Pulleys, and 10 in all Braced Girders. My impression is that the sets were larger than before with at least in some sets, addition of the new smaller parts to the existing Full- & ½-Lozenge pieces.

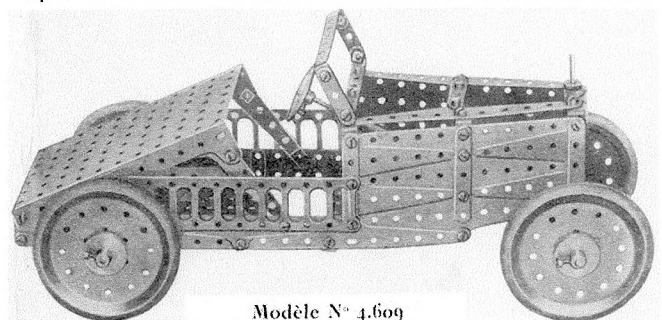
The **manual** to hand of this time has models for Sets 00 to 4, and on an introductory page has the same pictures of the sets as on the Leaflet, and with the same heading. Its cover (below) has a boy with a Crane in which the Lozenges are the old pattern.

SUMMARY OF MANUAL •Name: CONSTRUCTOR •Details of maker: Paray-le-Monial, Saone et Loire, on C1. •No dates or Ref Nos. •Page size: 245* 167mm. •No. of pages: 64+covers. •Language: French. •Printing: ½-tones of models; cover red, white, black, on light brown & white. •No Parts

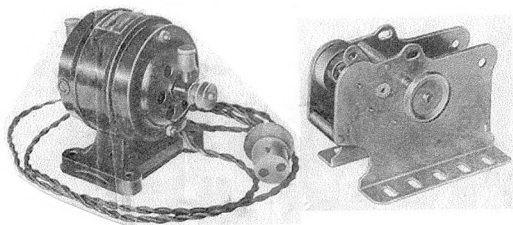


List or Set Contents. •Sets covered: 00-4. •No. of models for each set: 101,28,30,37,20,20. •Name, Model No., Page No. of first & last model of each set: 00: Letter A of GRAND ALPHABET,00.1,3; Jauge de voie,00.101,11. 0: Hangar en voûte,0.201,12; Bobinoir, 0.223,17. 1: Grue fixe,1.302,18; Pèse-lettre,1.327,25. 2: Poste d'observation,2.407,26; CAMION HIPPOMOBILE,2.437,40. 3: Presse automatique à plateau tournant,3.500,41; Appareil à dessiner,3.519,50. 4: Passerelle de chemin de fer,4.600,51; Bateau, 4.619,63. •Other notes: C3,4 missing; photos of Sets 00-4 on p2 and C/W & Electric Motors on p64; some errors in model numbering.

The previous line drawings are replaced by halftones and as before there is one good-sized illustration of each model, with, now, brief explanatory remarks and an extra view for a few. Nearly all the models include the new parts to a greater or lesser degree, and are either new or adaptations of earlier designs. Some at any rate do look more modern but others have rather lost their period charm, and the Braced Girder begins to look out of place in certain models, the No.4 Tractor shown in 3/29 for instance. Some models include pulley drives but otherwise the only mechanical features are some straightforward gear trains in the No.4 models, and centre-pivot steering, as in the Sports Car below, operated by the Crank Handle which carries the steering wheel. No 'super' models are shown in this manual but the whole of the



Modèle N° 4.609
Automobile "Grand Sport"



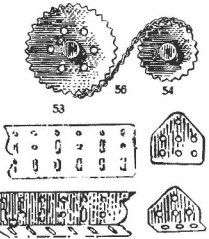
last page is taken up with photos of the 2 Motors (left). The 110v has oil cups front & rear and the claimed power

is 1/60 C.V. Neither is shown in any of the models.

About 1933 More new parts and drastic changes to the small sets. The **sets** listed are as in 1930 except that typed in between Baby No.2 at Fr.10.50 and No.00 at Fr.27, is 'No. spéciale.' at Fr.22. The other new item is a 110v Rheostat. Sets 00 to 4 (but not the Spéciale) are illustrated and though their lid labels remain as before, the layouts have been changed and **new parts** can be seen in them.



The latter are **11 & 31h Strips**; a new pattern **Braced Girder***; a **3*11h Perforated Plate**; a **3*7h Flanged Plate**, with flanges on the short sides; a **7h Trunnion*** & **Flat Trunnion***; and probably: **15 & 30t Sprockets***; a **7*7h Flanged Plate** with 2 flanges; and a **2*1h L-section A/G***, 31h long (* the flat version, not in the sets, is also shown – the bend line is between the rows with all & alternate slotted holes).



Sets 00-1 have been transformed with Strips & Plates replacing the Lozenge parts & Braced Girders. The 00 has 3 Flanged Plates, 2x 3*7h as well as the existing 7*11h; and 4x 3*11h Perf. Plates. In addition 2 each Trunnions, Flat Trunnions, & 65mm Loose Pulleys. The main extra in the No.0 is a second 7*11h Flanged plate, while the No.1 has a 7*7h Flanged Plate and 4x 65mm Fast (probably) Pulleys. Not all the parts in the larger sets can be seen but they certainly have the new parts, and probably the previous number of Braced Girders. No Lozenge parts can be seen in the No.2, but there are some in Nos.3 & 4.

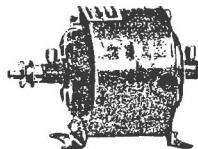
The prices of the sets compared with 1930 may give an indication of the extent of the change that had occurred. The Baby Sets had only increased by 5% but the 00 was 42% more at Fr.27. This left a big gap between the 00 & Baby 2, which was filled by the Spéciale Outfit. The other sets all increased by between Fr.11 for the No.0 to Fr.5 for the No.4.

The bottom of a **manual cover** can be seen with the No.3 and it looks like the '1930' one above, but new models would have been needed for the revised sets.

1937 A 'Tarif 1937' lists all the 1933 sets with illustrations of all but the linking sets. The Baby 1 & 2 lids are similar



Baby 1



Baby 110 volts
1 80 HP



Boîte
Spéciale



with a boy & a Hammerhead Crane (top left). It looks as if the R of the name is being hoisted by the Crane. Above is the Spéciale: the large wheels are the 65mm Loose Pulleys, and the Aeroplane on the lid is a model in the '1930' manual. The other sets seem to be as in 1933 but as in the No.00 above left, the lid label has been changed and appears to the type, illustrated later, that was used postwar. If so it is much brighter, though the photos are perhaps not quite as handsome.

The C/W Motor in the List looks the same as before but

is described as the No.2. The 110v Electric (shown between the Baby & Spéciale sets) has a slightly different case and is called Baby, 1/80 HP (earlier 1/60 C.V. was claimed).

The WAR YEARS Some parts in this period were made from very thin steel, or aluminium, plain or painted. Pulley bosses were also aluminium. A batch of parts with aluminium bosses, age unknown, includes Flanged Wheels turned from solid aluminium (instead of brass), and 22mm & 65mm Pulleys with aluminium discs, the latter painted red. The bosses of the Flanged Wheels are 8.5mm Ø, but the others are 9mm, as are later brass ones. All are double-tapped. The Strips are Period E, 11.0mm (±) wide, but I've no start date for it. The colour scheme is the postwar one with the red a mid-shade slightly darker than the MECCANO 1950s colour, and a light green similar to 1960s MECCANO.

The 1950s A **No.000 Set** has in it 2 Model Sheets with 000 models, a packing slip dated 1953, a Price List of parts dated Feb.1953, and a Set Contents sheet for Sets 000 to 4, and 00 bis to 3 bis. The **Price List** is the same as the one in MCS, and the main **parts** not already mentioned (and which weren't in the sets of the time) are: a **13h Strip**; a **Tyre** for the 22mm Pulley; **Perf.Plates** 5*11h, 7*7h, & 7*11h; 7 & 11h 'L' A/Gs; 3*7,11,31h **Flat Girders** (the A/G stock); a **Coupling***, and **Spring Cord**. The **card parts** #60-63 are in the Set Contents list of parts (but aren't in the sets), and so is a **Spéciale manual**, as well as the 000, 00 to 1, & 2-4 in the Price List.

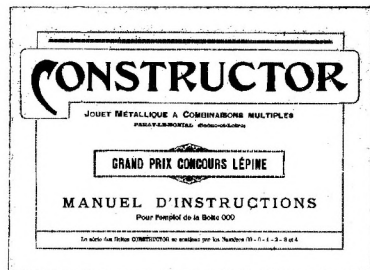
The **contents** of **Sets 00-4** seem to match quite well what can be seen of the 1937 sets. There are only 4 of each of the Lozenge parts in Sets 2 & 3, but Set 4 has 90 in total as well as 6 each of Flanged & Perf. Plates. It still has the same number of N&B as in the 1920s. **Set 000** is generally a smaller version of Set 00 but with 4x 22mm Loose Pulleys as wheels, and a few parts not in the No.00: 4 of the A/B-type Feet (#20), & 2 each of the 1/2-, End 1/2-, & 1/4-Lozenges. Did the factory have too many in stock, or did someone there still value/love these interesting looking parts?

The **000** is in a large light blue box, 39*20 1/2*2 1/2cm, with the lid label of the time below. It is in full colour on a yellow



ground, with 2 boys and a Transporter Bridge on the left, and the real bridge to the right with a Crane and a Warship in front of it. The colours of the parts are correct except that the Warship is blue, purple & fawn. The boy standing has a red jumper with black horizontal zigzag stripes. The parts were strung to a yellow backing card, and the N&B are in a light blue 6 1/2cm square card box with a boy and a Crane on the yellow lid label. The green parts are the earlier shade but some of the red ones are lighter, between the MECCANO 1950s & 60s. The 22mm Loose Pulleys are as light as 1960s MECCANO red, and are made from 2 discs spot-welded together. The Spanner is painted red. None of the small parts remained in the Set.

The first Model Leaflet is a yellow sheet, 49*35 1/2cm folded twice, with the outer face as below, and halftones of the models. There are 60 on one side, including the Alphabet & Numerals, from B1.1 to B1.60, and 33 on the other, from B2.1 to B2.33. Perhaps these were models for



the earlier Baby Nos.1 & 2 sets. If so apart from Strip parts & Brackets, the No.1 had 2 each of 1/2- & End 1/2-Lozenges, & 4x 22mm Ø Loose Pulleys. Extra in the No.2 were 2x 3*11h Plates, & a 7*11h Flanged Plate.

The other Sheet, 24 1/2* 17 1/2cm, and again yellow, has 4 models on both sides under the heading 'Modèles construits avec la BOITE 000'. They run from A 35 to A 42 and need all the main 000 parts except the End 1/2- & 1/4-Lozenges. What does the 'A' signify?

A photo of a 1956 No.3 Set is as would be expected, with a light blue box and the 000 lid label. The parts are in the 'standard' colour scheme, and are strung to yellow backing cards or packed in transparent packets. Noticeable though, the 22mm Pulleys are fitted with white rubber ring Tyres.

A Set Contents sheet, date unknown, shows 4 of these Tyres included in Sets 00-4. Otherwise the 00-4 contents are as in 1953 except that: a Hank of Cord (#48) is also included in each set; the card parts #60-63 are in the No.4; and there are 2 extra 3*11h Plates in the No.00. Set 000 is unchanged.

Also listed is the Spéciale (in the 000 column and vice-versa), so it seem that it was reintroduced, assuming this 'mid-50s' Sheet is after the 1953 one. If it was earlier then the 22mm Tyres must have been dropped from the Sets at some point, no doubt due to the war, and then restored.

At any rate the main Spéciale contents were 2 each of the 4 Lozenge parts; 10 Strips from 3 to 7h; 3x 1*7*1h & 2x 1*3*1h DAS; a 7*11h Flanged Plate; 2x 5*11h & 4x 3*11h Plates; 4 A/B; a Bush Wheel & 3 Wheel Discs; 4x 65mm Loose Pulleys; and 33 N&B. It would be interesting to see the models if a manual ever turns up.

Going back to the No.3, the 2 manuals with it (00-1 & 2-4) have the bright yellow cover below, with 2 boys, a Crane & a Loco, and a dock & skyscrapers in the background, all in solid colours. A similar 00-1 manual is as follows:

SUMMARY OF MANUAL •Name: CONSTRUCTOR 00-1 •No details of maker, dates or Ref Nos. •Page size: 264*211mm. •No. of pages: 32+covers. •Language: French. •Printing: 1/2-tones of models; cover solid colours. •No Parts List or Set Contents. •Sets covered: 00,0,1. •No. of models for each set: 109,42,39. •Name, Model No., Page No. of first & last model of each set: 00: A of GRAND ALPHABET,1,1; Chariot à bagages,106,11. 0: Echafaudage roulant,200,12; Tracteur agricole,241,20. 1: Régulateur, 300,21; Canon de campagne,338,30. •Other notes: the models are not always in exact order, & there are 2 of No.46; the Electric Motor is shown driving a Gearbox on p31, & a Flywheel on p32; C2,3 blank, - C4 has CONSTRUCTOR in a large green rectangle with LA MÉCANIQUE POUR TOUS behind in a red circle.

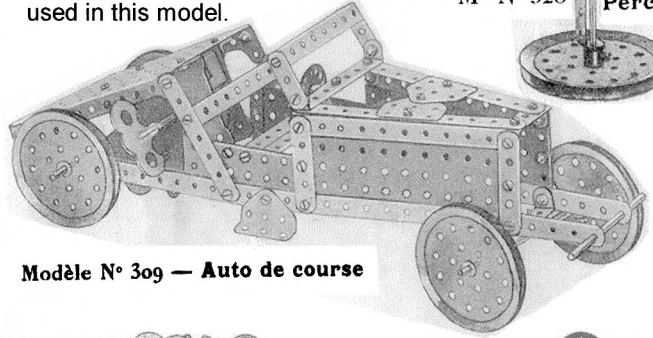
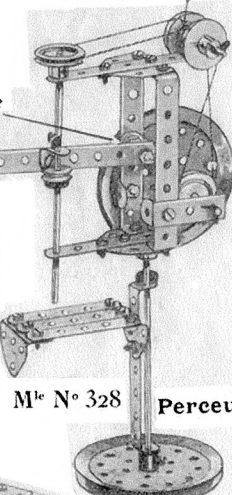


There is a large halftone of each model and a Parts List for all but the 00 ones. The models are a fair selection, fairly simple and straightforward, but, with good use of the Plates

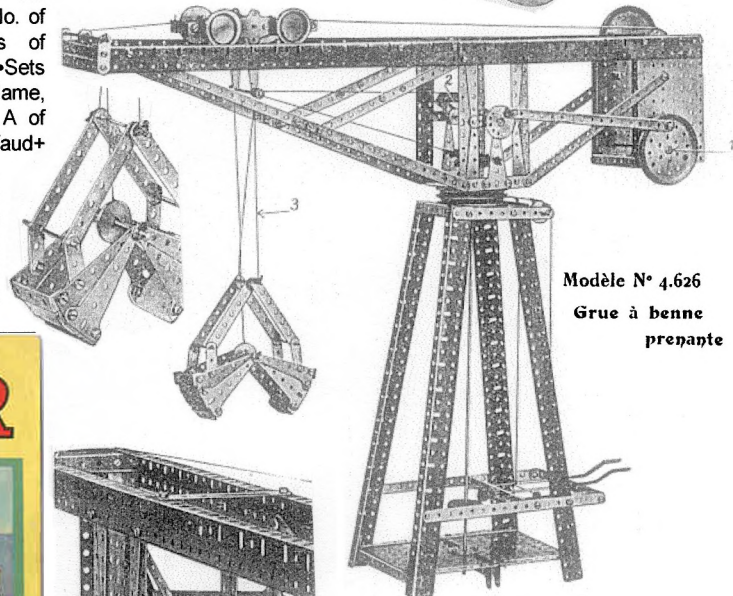
in the sets, quite realistic, rather like the better MECCANO models of the early 1930s. Few of them require parts to be curved or bent. The 22mm Tyres are only used in 2 models. The 65mm Pulleys are about right for the vehicles and the feet on the 7*11h Flanged Plate are often useful, and rarely look out of place. The models do not of course contain any of the Lozenge parts that distinguished earlier small models. Below the Drill Press is from Set 00, and the Sports Car is a Set 1 model. It is quite similar to the No.4 version shown earlier except that it has no steering, and it's interesting to see that a handful of Strips and 4 Plates have replaced 24 Lozenge parts & 2 Braced Girders. It is now powered by the C/W Motor and so is one other model in this manual.

Also below the No.4 Crane which is the one featured on the small card N&B boxes in the sets. The two Crank Handles at the bottom control slewing & hoisting, with 2 pairs of 'Bevels' in the hoist drive; the grab is operated by the Pulley 1. An earlier version in the 1930 manual had no crab or grab, and the tower legs & top horizontal members were made of 44 Lozenge parts instead of 8 A/Gs. The No.4 still had over 90 Lozenge parts in it but only 26 are used in this model.

Traverse coudeé 3 trous



Modèle N° 309 — Auto de course



Modèle N° 4.626
Grue à benne prépanée

Pièces nécessaires

N ^{os} 1... 2	N ^{os} 10... 8	N ^{os} 28... 3	N ^{os} 36... 4
2... 4	14... 6	29... 6	37... 7
3... 8	15... 1	30... 1	40... 4
4... 12	16... 6	31... 1	43... 112
5... 8	21... 18	32... 1	44... 6
5bis... 8	23... 2	33... 2	45... 4
6... 8	24... 2	34... 2	49... 8
7... 4	25... 2	35... 4	
8... 6	27... 4	35bis... 1	

Another 00-1 manual with identical models is known – it has the blue cover 252*207mm, with dark blue lettering shown below. The back cover is blank and so are the yellow



inside covers. The page numbers and layout are identical to the first 00-1, and from its covers it would have been earlier, but not much because it too has the 2 models with the 22mm Tyres.

A photo of a **No.0 Set** has the same style of packaging as the

No.3 and the only differences in the parts are that the 22mm Pulleys look brass, the 16mm looks grey, and the 65mm Loose Pulleys have 6 face holes on the same pcd as the outer ring of the Fast version.

The 1960s At some point the lid label was changed to the one below, almost as before but the boys are different, both now with dark hair and plain, dark, long-sleeved jumpers, green for the older boy, and red for the one kneeling down.



Just when this change occurred isn't known, but a **1960 No.3 bis** has the new label. A photo of it shows parts not seen in earlier material: red Sprockets, black 65mm Tyres (which still look like rubber rings), and red Cord. Otherwise the parts are 'standard'.

A **No.3** is shown in Plate 74 of *Eisenzeit* with unpainted Sprockets and brass 26mm Pulleys. Some of the Card Parts can also be seen.

An incomplete **No.1** has lighter red parts like 1960s MECCANO, and green parts rather lighter and much brighter looking. Green Cord was found in it

The **Spanner** (left) is still red but is now 2-ended, 75mm long o/a, cranked at one end & angled at the other; the **Screwdriver** is the wire type, which had replaced the original flat one sometime in the 1950s.

A photo of a **No.00** also shows these Tools, and lighter looking red parts.

The END For whatever reason CONSTRUCTOR ceased being produced on 31 July 1964. That it was an original & interesting system is not in doubt, and the parts from the earlier phases have been, fairly I think, described as 'beautiful'. However it is generally agreed that many of the manual models didn't do justice to the parts. That said, it is perhaps more difficult to use the parts effectively in some types of models - my own efforts, using the later type Lozenge parts, started with the thought of making something mechanical & ended with a model of an Edwardian Summer House. I don't know of any system really comparable to CONSTRUCTOR - triangular elements were used in CHARPENTO (21/617) & STEEL WORKER (16/449) in the 1920s, but they were larger and only suitable for the frameworks of buildings - METALLO TRIGON (5/93) in 1913, was perhaps the nearest but the parts were very angular looking and lacked flexibility in use.

ENDWORD - Commercial History Constructorama & the Meccano-Champagne club held an exhibition of the CONSTRUCTOR at Paray-le-Monial in February, and Jeannot Buteux kindly sent a poster about it, which gave the details that follow, discovered as a result of research by

Constructorama. Following the first Paul Goiffon patent (491527 of 15 June 1916) and the additions later in 1916 (20829 of 13 Sept., 20837 of 17 Oct., & 20840 of 18 Nov.) trade marks were registered on 30 Dec. 1916. From some point not known exactly A.Frégonara & F.Mangard started production at 19, quai Arloing, Lyon. (Perhaps A.Frégonard was related to the Charles Fregonard who took out the 1919 patent described earlier.) The firm was acquired by Léonce Bailly-Comte on 6 Dec. 1918, and he joined forces with Adolphe Gayet on 1 Feb. 1920 to found the Société Française du Jouet Métal, of 119 rue de Sèze, Lyon. The company was bought by Antoine Maillet on 1 July 1925, and its address then was 'Lieu de Bellevue', Paray-le-Monial. Production at Paray saw some changes to the dimensions of the parts and improvements in their quality.

THANK YOU to all who have contributed to this account including Frank Beadle, Josep Bernal, Jeannot Buteux/Constructorama, David Hobson, Harry Marien, Jacques Pitrat, & Clive Weston. Also to Constructorama & the Editor of the CAM Magazine for permission to reproduce the Period A illustrations.

Another GILBERT MECCANO Wide Beam Set

Kendrick Bisset has had a lucky find and kindly sent details. It's a Wide Beam Outfit No.1026 and seems to be very similar to the No.1025 mentioned in 12/319. Kendrick wrote, "The 'box' is a 6*9" paper envelope similar to today's large envelopes in color (yellowish brown) and construction. The front (below) is printed in black and doesn't show the Set No.



Pages 3 & 4 (unnumbered) of the 4 page manual (one folded sheet) match those in MCS for the No.1025 (/FB, MECCANO (AMERICA) 'X' SERIES, pp5a & 5b) EXCEPT that the 'made with the No.1025 Meccano Set' on page 4, has been replaced by 'made with the No. 1026 Meccano Set'. The '1026' is not on the same line as the rest of the text, and is a little crooked. The front of the manual has 'MANUAL OF MODELS / Built with the new No. 1026 / MECCANO', copyright 1933, the New York address, & Form M1491.

Quantities: 1 Flanged Plate; 2x 3 3/4" Beams; 4 each of 2 3/4" & 2 1/4" Beams; 2 DAS; 3 Threaded Rods, 2 1/2" long; 2 Angle Brackets; 2 Washers; 21 Nuts (some may be missing); 11 Bolts but I think there are supposed to be 15.

The parts are as described in OSN 12, except that the 2 3/4" Beams have the same middle hole as the DAS. The Wide Beams are green, the Flanged Plate is red, the Angle Brackets & 3/4" Washers are nickel, and the Discs are dark blue. N&B are 8-32 and the Bolts match one style of Erector Bolts, with shiny (nickel or chrome) plating.

The Beams are 0.041" thick over the paint (which is quite thick, and in many cases has drips and runs); The Discs are only 0.022" thick, and so is the Flanged Plate. The latter has again a poor paint job and is so thin that 'axles' will screw themselves across, and bind when rolling along.

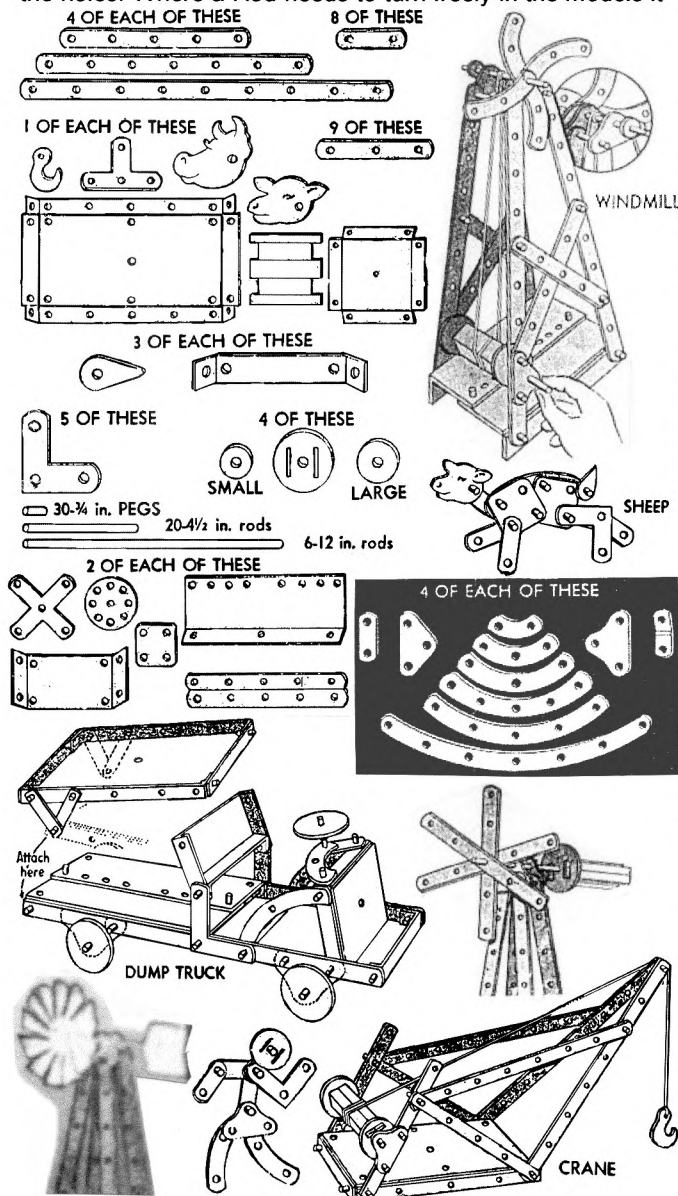
Comparing the parts to my LITTLE JIM Wide Beam outfit (similar to the 'Snap Rivet' sets in OSN 12), the 1026 2 1/4" Beams are fully radiused at the ends, while the L-J ones have slight 'corners'. The L-J Beams are 0.036" thick, but that may well be due to a better paint application. The L-J Flanged Plate is also 0.022" thick."

BILD-A-SET MCS has only an advertisement for this system but now Kendrick Bisset has kindly sent a copy of a Model Leaflet from a set, & lent me a handful of the parts. As mentioned in 20/587 the parts are cardboard & are held together by wooden dowels, so this isn't really an MCS, but it is interesting to consider the possibilities of using cardboard, or plastic nowadays, to allow a cheap set, but with a fairly wide range of parts, and models that though robust enough to be played with, can be easily assembled.

Below, the 37 different parts, and their quantities in the Set. The holes, once the dowels have been pushed through, are about 4.2mm Ø; the basic pitch is 1½", with 3" in some cases, mainly in the Plates, and ¾" in a few others, in the Wheel Disc & L-Plate for example. Some oddities may be found though - in the parts to hand the outer holes in the L-Plate's flange are at 6" pitch, but those on the remote edge are at 6⅝", with the ¾" holes spaced inwards from them. The extra holes which can be seen in the Dump Truck below are also at 6⅝". To give an idea of size the Strips are ¾" wide, the Wheel Disc is 2⅝" o.d., the L-Plate is 6⅝" long o/a, & the Sheep's Head is 2⅞" from nose to ear.

The parts are cleanly & generally accurately cut from ¼" card, which is a different shiny colour on its 2 sides. The Strips are green/blue, & the other parts red/yellow. Flanges are formed by bending along the pre-scored lines but need to be pegged to hold them at 90°. The part between the 2 Flanged Plates is folded to give a square-sectioned Winding Drum, with the end tags pushed into the slots of the Slotted Disc, as in the Crane below. The eyes & other features of the Heads are lines impressed into the card.

The Rods are about 1¼" (4.4mm) Ø and are a tight fit in the holes. Where a Rod needs to turn freely in the models it



is usually journalled in the apex hole of one of the 2 types of Triangular Bracket, and no doubt this hole is of a suitable diameter. The 12" Rods are not used in any of the models.

The Leaflet is a single sheet folded to give 4 sides, 9*6" deep. A fair selection of 30 straightforward models is shown, plus 39 Letters & Numerals, and 3 somewhat larger models that need more than one Set. All are clearly shown but the parts are not always drawn correctly, with 8h Strips for instance, and in a couple of cases geometrically impossible frameworks. The only mechanical feature is the Winding Drum as used in the Cranes, & in the Windmill below. Most of the models look as if they would be reasonably successful & not too fragile. How durable the parts would be is questionable, and certainly care would be needed not to bend them too much, particularly when inserting or removing Pegs & Rods. This could lead to cracking across the holes as in one of the parts to hand, which has actually been used. The Leaflet warns that a twisting motion must always be used.

Printed on the Leaflet is 'Created & produced by D. A. Pachter Co., Toy Division, Merchandise Mart, Chicago', and 'Copyright 1943'. Some small changes may have occurred in the next few years - in MCS the colours are given as red, green, & silver, and possibly they relate to the Set in the MCS ad already mentioned. It is in Spanish and says that BILD-A-SET is imported from North America; above it on the /FB page is written 'Buenos Aires, 1946'. The Set is said to contain 170 parts against the 167 in Kendrick's (from the numbers of parts given in the Leaflet). 170 are also claimed on the Richard Symond's box top mentioned in 15/426, though then it was wrongly called a manual cover. Two possibly new parts shown on it are the Fan & Vane on the top of the Windmill bottom left below. Above it to the right is the top of an otherwise identical model in Kendrick's Leaflet, where the Winding Drum serves as a vane. Some of the models on Richard's lid are also new, the Crane Truck in OSN 15 for example. 2 other BILD-A-SET outfits are included in the MCS ad, one about Fire Engines & the other about Trains. The models look realistic but it isn't clear what they are made of, or whether they are constructional.

A 'part' not yet mentioned is a card sheet of slotted partitions, which were to be removed & assembled in the box to 'keep all the parts neatly in place'. An Extra MCS Sheet will show an illustration of the box with the partitions & parts.

An M&S BILDICO Manual & some Parts Notes on the BILDICO Set sold by M&S were given in 16/440 & 19/539, and now David Hobson has kindly lent me an 'M&S' manual, as in MCS, and the parts that were with it - all of a Set except for the Disc Wheels, the Hooks, Tools, & Twine.

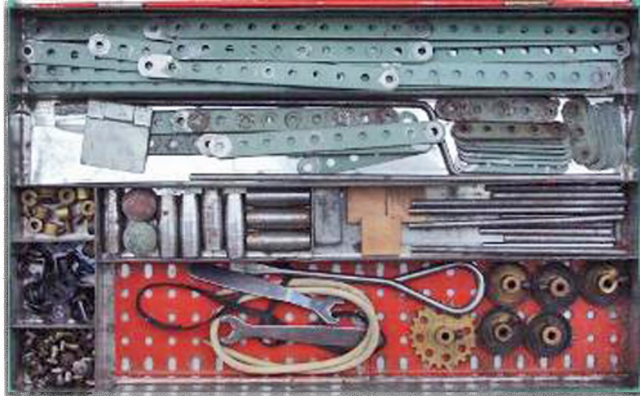
Apart from some minor differences, the parts are as described in OSN 19, but with one noteworthy exception, **the size of the holes**. Instead of being 3.8mm Ø, all the Strips & Brackets, except the 3h Strip, have the larger 4.2mm size, previously seen in the 'Napro' Set described in OSN 16. In passing the ends of the 5 & 11h Strips are fully rounded; the OSN 19 parts had the usual LYNX semi-radius.

Other differences: • The plain steel **N&B** are 4BA rather than 5BA. But do they belong to the Set? The quantities are about right but all are ¼" u/h, with none of the longer ones that are needed for the models. The Bolts have 6.1mm Ø round heads, and the pressed Nuts are 8.0mm A/F (so they wouldn't fit a LYNX Spanner). The 1" Pulleys have the normal 5BA tappings by the way. • The shaft of the **Crank Handle** is even longer at 4½". • The holes in the flanges of the (5*7h) **Flanged Plate** are all round.

So were there ever Napro BILDICO sets that had Strips & Brackets with 3.8mm holes? And did the other parts in Napro or M&S sets ever have the larger holes?

The manual with the Set is as described in OSN 19 except that the Giant Crane is actually on the outside back cover. Three smaller Cranes are shown on the inside back cover, so that makes 30 models in all.

Konstruktionslådan X An empty box belonging to the only Set in this Swedish system was described in 20/581. Now Staffan Kjellin has found two identical boxes with parts in them, and one, more or less complete, is shown on Staffan's web site at the address given in OSN 10. Thanks to Staffan, I am now the proud owner of the other one, and though it contains only a few parts, they are enough to see the main features. Other details come from the web picture below, reproduced courtesy of Staffan, and from notes he kindly sent.

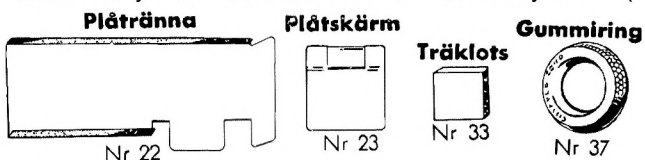


The box is made of tinplate, painted red on the outside apart from the lithographed lid shown in OSN 20. It is a solid job with the partitions that form the 8 compartments spot-welded to the base, to the sides, and to each other.

The 37 parts in the system are clearly shown in MCS so only the details and unusual features need be described. First those in my Set. • **DATA** (in mm) **Strip** (11-hole): •hole pitch/dia, 12.7/4.2 •width, 12.6; •thickness, 1.12; •ends very nearly fully radiused. **Collar**: •o/d, 9.0; •i/d, 4.04; •brass; •single-tapped. **Thread**: $\frac{5}{32}$ " BSW. **Axle Dia**: 4.01. **DP (Mod)**: NA. **Nut**: hex 8.0 A/F; **Bolt**: tapered CH 6.1 Ø; both brass plated steel.

Strips. The 11h above is typical of the 25, 11, 9 & 5h ones seen, but the 25h is wider at 13.1mm, and it, & the 5h, are thicker at 1.3mm. The paint looks a medium grey with a slight greenish tinge. The **Flanged Plate** is painted orange-red, and matches the MÄRKLIN pattern exactly, except that at .85mm, the metal is a little thicker than a 1970s MÄRKLIN example. The **A/B** is also similar to MÄRKLIN except that at 13¼mm the arm with the round hole is some ¾mm longer; it has a chemically blackened finish. **N&B**. The Nuts are pressed and 2.2mm thick. The Set Screw in the Collar is brass, 6mm long under the 5.2mm Ø CH. **Axles** have sheared ends, rounded slightly. **Quality**. Apart from the variation in the width of the Strips all the parts are well made, and were probably well finished originally.

Now for the parts in Staffan's Set. The **25mm Pulley** is black with a brass boss that appears larger in diameter than the Collar, perhaps 10mm. The 38mm **Sprocket** looks brass and has a similar boss; with 23 teeth, it may be MÄRKLIN pattern. The **Crank Handle** shaft scales at 6¼", and the handle's offset at 1½". Both the tinplate **Guides** are shown below – only the smaller one can be seen clearly above (to

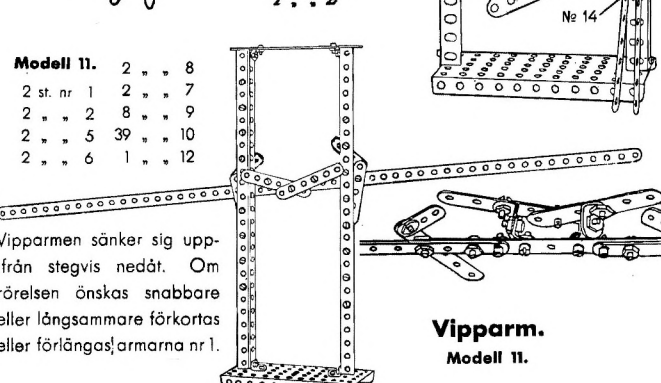
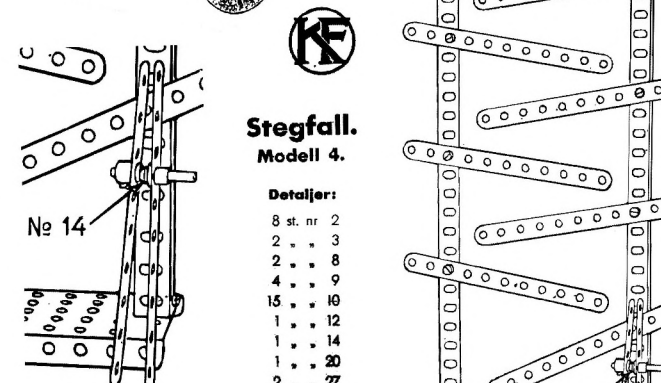
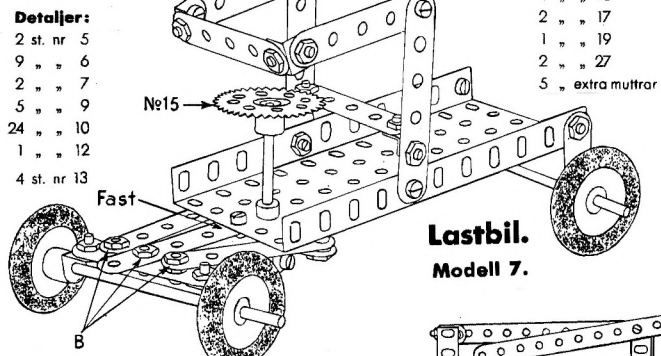


the left in the 2nd compartment down), and it scales at about 1⅜" square. The centre top part is joggled so that it can be pushed over a Strip. The **Rollers** are turned steel, perhaps 1⅜" long - their slightly domed form can be clearly seen. The **Driving Bands** look cream and slightly thicker than the Axles. 3 of the square **Blocks** (Träklots) are between the Rollers & the Axles, and they are plain wood, some .85" square. The 2 **Balls** (Lerkula) to the left of the 4 vertical Rollers are clay marbles which scale at ¾" Ø, one green and one brown. **Tools**. The Screwdriver is about 5½" o/a and the

Spanner 3¼". The latter is black; the former polished steel. The Set Contents has only one Spanner but two are in the Set, and would be needed for the specified lock-nutting. No **Tyres** or **Rubber Belts** can be seen in the box.

SUMMARY OF MANUAL •Name: modellbok för konstruktionslådan X. •Details of maker: Kooperativa Förbundet. •No Dates/Ref Nos: •Page size: 247*167mm deep. •No. of pages: 32+covers. •Language: Swedish. •Printing: cover as in MCS & p716, white on green ground with some red & black; line drawings of models. •Page No. of Illustrated Parts & highest PN: '2',37. •Page No. of Set Contents & highest PN: C4,37. •Sets covered: one, unnumbered. •No. of models: 28. •Name, Model No., Page No. of first & last model: Snurra, 1,3; Uppfordringsverk, 28,28. •Other notes: •C2,3 blank, Intro on 'p1'. •PR on C4, NILS ANDERSSONS TRYCKERI. •Details from photocopy.

There is a large line drawing for each of the 28 models, with additional views and a few words of explanation in a few cases. Many of the models are rather novel and/or original. At first they are quite simple but some of the later ones include quite complex features, though all within the constraint of the 61 N&B in the Set. Two of the simple models are shown below. The PN 14 of the Stegfall is a 12mm Pulley and the Flanged Plate has all round holes. The Lastbil is the only vehicle (apart from 2 very simple Trolleys) in the Manual, and the only one in which the Tyres are used, though they are not in the Parts List for the model and are shown with tread in the Illustrated

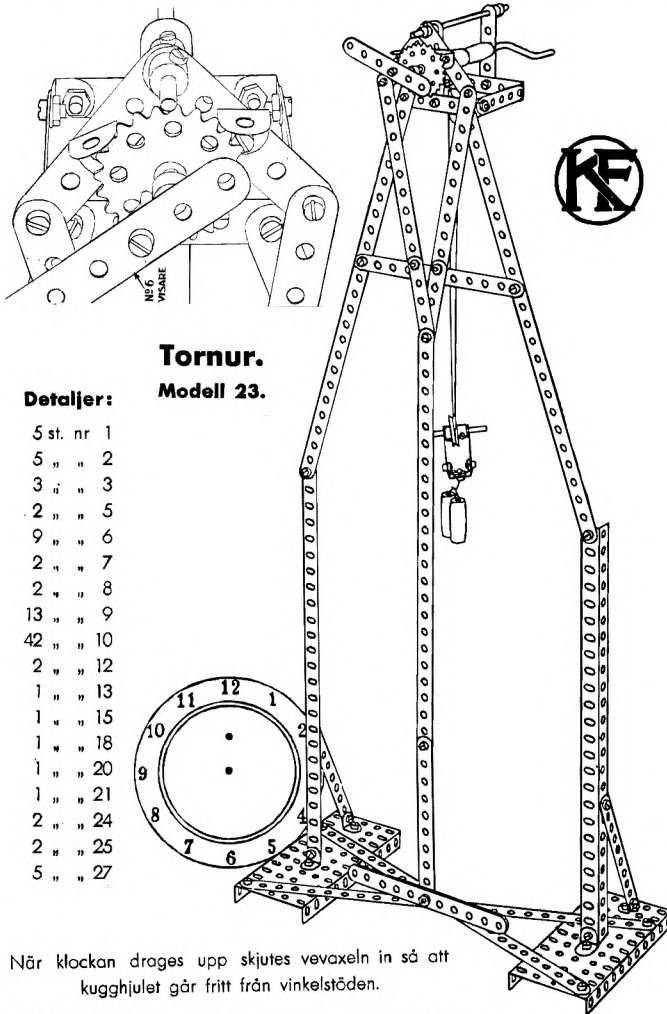


Motion in most of the 'intermediate' models is obtained using Pulleys linked by the 2 different length Driving Bands, in a Windmill and a couple of fairground models for example. Exceptions include Laboratory Scales and a more ingenious 'Descending Toy' (above) - this is the other model that

shows a Flanged Plate with no slotted edge holes.

Most of the last 13 models use the Belts and Driving Bands, sometimes in various conveyor belt models, and sometimes the Blocks or Balls are recirculated by being raised between 2 parallel Belts running close to one another. This is the case in the MCS model (full name Transportverk), and it is the only one in which the Guides are used. The Kulslunga (Ball Thrower?), on the back cover of this Issue, is another example and the idea (from the instructions) is that the Ball runs down the top ramp, drops onto the lower one, and, after passing between the Belts, bounces back up onto the top ramp. Presumably it shoots out from between the Belts and bounces off the lower Belt where it is inclined sharply upwards. The Strips '4' are to centre the Ball on the ramp. The remaining models include a Funicular Railway with more or less elaborate brake and docking linkages (I think), the Runner on the back cover, and the Clock below. The latter is the only model in which the teeth of the Sprocket are actually used, and also the only manual model I know of that uses a Sprocket as a scapewheel, with A/Bs as pallets, a very efficient escapement. The pallets are disengaged from the scapewheel when winding up the weight by pulling the Crank Handle backwards. Despite the clock face shown (to be made from card) I calculate that the hand takes about a half minute to make one revolution.

The handful of special parts in 'X' allows some interesting models of a different character to those normally found in small systems. If, as may be the case, I haven't done them justice here, let me quote the MCS comment, 'Sound and ingenious mechanisms'. My only caveat is that some of the frameworks look a little less than perfectly rigid, and important Strips are sometimes held in position by a single N&B. Nothing a few extra parts wouldn't fix though.



Detaljer:

- 5 st. nr 1
- 5 " " 2
- 3 " " 3
- 2 " " 5
- 9 " " 6
- 2 " " 7
- 2 " " 8
- 13 " " 9
- 42 " " 10
- 2 " " 12
- 1 " " 13
- 1 " " 15
- 1 " " 18
- 1 " " 20
- 1 " " 21
- 2 " " 24
- 2 " " 25
- 5 " " 27

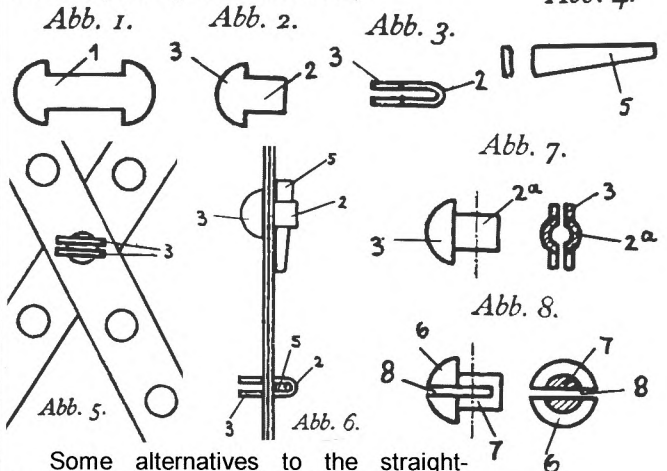
När klockan drages upp skjutes vevaxeln in så att kugghjulet går fritt från vinkelstöden.

Förhållandet mellan visaren och vevarmen justeras. Urtavlan göres av kartong. Som lodlina användes stark sytråd som fastklämmas mellan rullarna.

Vinkelstöden justeras så att de växelvis gripa in i kuggarna å kugghjulet. Vevaxeln bör luta något nedåt bakåt.

The PHANTASIE Patent Werner Sticht kindly sent a copy of this German patent, Nr.389220, which was granted to Josef Sponseil of Nürnberg on 21 Dec. 1922. (Joseph Sponseil & Co. of Nürnberg was the original maker of PHANTASIE.) The patent relates to holding parts together with wedged clips, and the actual PHANTASIE parts were illustrated in 15/417. Similar EZY-BILT Clips were shown in 22/637.

Abb.1-9 below are from the Patent. The wedge has a quite sharp taper and this would allow one length of Clip to be used when joining 2 or more Strips together. In practice though a much shallower taper is needed to keep the Wedge in place and Washers, not shown in the Patent, are used as packing when necessary.

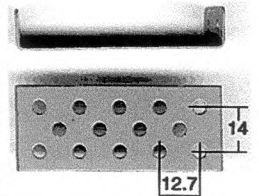


Some alternatives to the straight-forward 'T' Clip (of Abb.1-6) are offered. The sides in Abb.7 are formed to fill the holes in the Strips, & in Abb.8 a solid rivet with a slit in it is used. Finally Abb.9 shows a one-piece Clip with a wedge which is rotated by 90° to pass through the Strips to be joined, and then turned back and slid along the pin to secure it. Rather neat.

Werner wrote, 'I wonder why Sponseil got a patent, as Lilienthal used a similar method to fasten his Strips together (see 22/623).'

METALLUS Parts A German firm called Rekersdigitaltechnik sell a wide range of parts with 12.7mm hole pitch. Many are similar to MÄRKLIN but there are also 'standard' parts in other sizes, some 'specials', and various Motors. All are shown at www.metallus.de, and the site has an English version option. One of the parts I noticed was the Gear Plate shown in 23/659. None of the large MÄRKLIN circular parts are currently available, nor any Gears. Sprockets are listed though, in steel, brass, aluminium or plastic, and Ladder & Roller Chain for them. Sizes up to 250 teeth can be had, but the minimum order for these parts is DM150.

The 'mystery' part right was sent to David Lawrence with a Motor and when he asked its purpose he was told that it is not compatible with any MÄRKLIN part but was the result of bad programming of a punching machine. Instead of scrapping it, it was hoped that it might be of use in David's future models.



The colours of most of the parts seem to match MÄRKLIN but David was also told that the green colour is to be changed to the [slightly darker] original [prewar] MÄRKLIN shade.

The only METALLUS part I've seen is the one above and it's well made and finished (the left bend isn't as far from 90° as it looks in the illustration).

The Rekersdigitaltechnik address is Hauptstraße 39, 48480 Spelle, Germany; email: rdt@redig.de.

MECHANIX from China The last incarnation of WISDOM / CONSTRUCTION MODELS was MECHANIC (see 17/471, 22/640), but now the name is MECHANIX. Last year Ivor Ellard found 5 different MECHANIX sets on sale at The Emporium, Maldon, Essex (along with a new small set of Indian MECHANIX, more of that later) and he very kindly lent them all to me for this write-up. It's the parts that initially give away the Chinese origin of the latest MECHANIX, because the only indication of the maker/supplier/country of origin is 'Gosh International PLC' in small print on the boxes. And there are no Set Nos. but Item Nos. are printed above the barcode, in the form 455/00X, so I'll refer to the Sets as '00X'. The number of parts in each set is also printed on the box lid. The Model Leaflets don't have either but each one does show all the parts with the number of each in the Set. The same illustration is on the bottom of the box, together with a 1998 copyright date on the 'CE' panel.

It turns out that, with one exception, each of the Sets is more or less equivalent to one of the old WISDOM sets. The exception is No.007 which breaks fresh ground with some new parts, including Gears, a large plastic Road Wheel, and a 3v Electric Motor. Many of the models for all the Sets are new but sadly they are mostly not as good as the best of the old ones:

The **packaging** is similar for each set, with the parts attractively laid out in a blue, moulded plastic tray, with a fitting, transparent cover. The box has end openings to admit this unit, and the box lid is a flap which allows the parts to be seen when raised. All the boxes are yellow but nearly all the top of each is taken up by a very bright colour photo of a selection of models that can be made with the Set, taken against a rocky background with the sky above. Some of these models aren't on the appropriate Model Leaflet, but photos of all the Leaflet models, 6 for each Set, are on the bottom of the flap. Below a photo of the 005 lid.



Each **Model Leaflet** is one sheet folded to A4 size and again is yellow with all illustrations in colour. On the front are the parts as already mentioned, and photos of some of the models. Instructions for the 6 featured models are on the other 3 pages, 2 on each, with 4 photo steps for each model and a list of the total parts needed by that stage at each step. That means to find the new parts needed for a step, the parts for the previous step have to be deducted from those for the step in question. Quite apart from that the photos, though clear, do not make all details immediately apparent. All wording on the Leaflets, and the boxes, is in English.

The PARTS Most of the parts are as in MECHANIC, but there are a few minor exceptions. One is the **Spring Clip** which is now black plastic, 5mm wide with wings only 2mm long – it works well enough but doesn't grip as tightly as the metal type. The old type is still shown on the boxes and Model Leaflets. Two of the **Axles** are slightly shorter: the 3¾" of 4mm Ø is now 3½" long, and the 4" 2.6mm Ø is 3¾". Another change is that the **Screwdriver** now has a crosshead. Also the **Spanner** is noticeably less cranked than before, and is opposite hand. Like the MECHANIC one (not mentioned at the time) it has no centre piercing.

Other changes, and the new parts, will be noted in the descriptions of the Sets below. The PN's have been changed and as usual are not consistent between the Sets.

The **quality** of the parts is perhaps slightly better than MECHANIC, although some bends are still not at 90°. The Axles now have smooth ends, but they are slightly enlarged, and though this doesn't matter with the oversize bores of the Pulleys & Bush Wheel (now consistently 4.5mm), it is a problem with the Gears, as will be explained.

Colours. The blue paint is the same as in MECHANIC, but the red is the non-metallic lightish colour, as used in some CONSTRUCTION MODELS (CM) sets (10/238), rather than the darker metallic shade. Plastic Plates are yellow in some sets & white in others, though always shown yellow in the illustrations. The 3h Strip is still nickel.

The SETS Details are given below and where comparisons with the Contents of WISDOM sets are made they are against the maximum quantities given in MCS. None of the outfits have any of the 2.6mm Ø, 2¼" Axles.

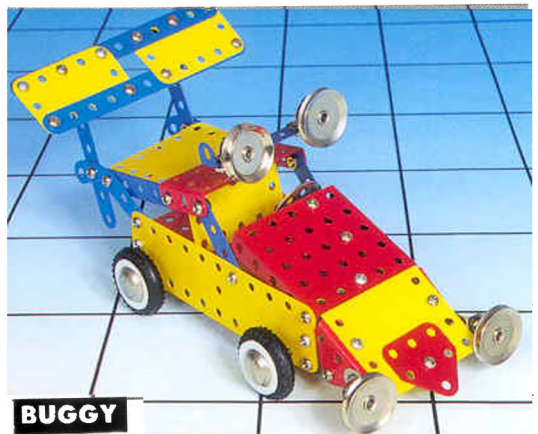
No.003, 156 parts. The box is 32*25*3cm and cost £6.

The inventory is exactly as that of the MECHANIC 192 Set of OSN 17, which in turn was the same as the WISDOM No.2. The **Flexible Plates** are white. The ½" **Loose Pulley**, normally about 12mm o.d., is 18mm o.d., & is translucent, rather than opaque, red plastic. 2 **models** are modified MECHANIC ones, but the others are new. The Dinosaur above looks reasonable, though it doesn't do anything; the others are rather ordinary.



No.004, 236 Parts. £8, in a box 36*27½*3cm. The parts are in 2 trays and the contents are the same as those of the WISDOM

No.3 minus: 5 A/Bs, 1 Reversed A/B, 1 Spring Clip, & 2 each 1" Pulleys/Rubber Rings. Also a Loose ½" Pulley (of the 12mm type) replaces a Fast one. The **Flexible Plates** are yellow. One of the models is the Dozer shown in 22/640; the other 5 are not in my 'r/g' CM No.3 manual and are rather graceless, like the Buggy above, though a rather strange Windmill does have a right-angle friction drive through 2 Pulleys with Rubber Rings.



No.005, 333 Parts £11, in a box 41½*28*3cm with, again, 2 trays of parts. This is the WISDOM No.4 less : 2x 7h Strips, 1 each 5*5 & 3*11h Flex. Plates, 2 each 1" Pulleys/Rubber Rings, 1 Spring Clip. The Flexible Plates are white. None of the models are in CM manuals and apart from an average Loco and a bulbous Seaplane, are space oriented. They don't do anything but they do at least look interesting. The Sailing Ship on the box lid shown earlier looks even better (to me), but isn't in the Model Leaflet. The CM models were a fair selection with quite realistic Machine Tools, Cranes, & various Vehicles. (My thanks to Orion DreamDancer for a copy of a CM No.4 manual.)

No.006, 164 Parts The box is 41*29*5½cm and costs

£11. This is the WISDOM No.5 less: 2 each 1" Pulleys, Rubber Rings, Spring Clips; a 3½" Axle, and a 5/8" Pulley. The extra depth is to accommodate the C/W Motor – but it isn't a large Set and has only 50N&B, against 95 in the No.005. The Flexible Plates are yellow and the Motor & Key are iridescent. The body of said Motor is 80*48mm and the output shafts are 2.6mm Ø (like the smaller diameter Axles). As well as a cross shaft which would often carry Road Wheels, there's a vertical shaft on top, and the winding spindle is underneath. The Road Wheels simply push onto these shafts, but the Pulleys are over 4mm bore and therefore run eccentrically when mounted on them. This is also the case when the Coupling is used to extend a shaft. In passing this part is BZP on steel, 8.4mm o.d. & 25mm long, with a 4.2mm bore & 2 s/t holes at 12.5mm pitch. The models are small and all but one are driven by the Motor. Of these there's a Helicopter, 2 Cars, a Robot which looks interesting but doesn't do much, and the best, a Roundabout. All but the Robot will be on one of the MCS Sheets. I haven't an old No.5 manual but the Helicopter bears only a vague resemblance to the one shown in *Infos Jouets* No.11.

No.007, 452 Parts This set cost £13 and the box is 40½*28*4cm. The parts tray has no top, but instead it is in a clear plastic bag. The parts in most of the tray's recesses are kept together with black plastic ties. **Flexible Plates**, including the 3*5h Triangular, are white. The new parts are shown below, and comments as necessary follow. • The



Motor is yellow and its leads have spade tags to allow connection to the **Battery Holder**. The latter, also yellow, has a 3-position switch and 4 mounting holes along the bottom. It is a neat unit except that the AA cells have to sit up at an angle because the springs at their –ve ends are slightly too long. • The 57mm Ø (push-on) **Road Wheels** are black with yellow centres, and have no back face. • The arms of the nickel **2*1h A/B** are 25 & 16½mm, and the top hole is slotted to 6½mm. • Both the **Threaded Coupling** & the **Collar** are 8.4mm Ø and both are BZP on steel. The Coupling is 18mm long with a bore of 4.5mm, and the one cross-tapping does not go right through. The Collar is 10mm in length with a bore of 4.2mm, and is also single-tapped. There has been a mix up over the Couplings because the ordinary type, as in the 006 Set, is shown in the Illustrated Parts, and is needed for the tail rotor drive of a Helicopter illustrated on the lid and on the front of the Model Leaflet – however in the step-by step instructions this drive is completely omitted. The Threaded Coupling is only used in one model, as decoration, and in that case the plain Coupling would do nearly as well. • The **Gears**. These are in a dull white plastic moulded onto s/t brass bosses. The Pinion is 14mm o.d. with 16 teeth and a face width of 5mm; the Gear Wheel is 37.6mm o.d., has 46 teeth, 2.4mm wide, and the plastic at the centre is thickened by 2mm on the outside to adequately support the boss. The DP is 32, so a little coarser than MECCANO. The Worm is 12.9mm o.d. and 22½mm long o/a, with 5 turns of thread over 13½mm. The Gears seem to be well made and they run well together, though a little loosely, at standard spacings – the problem is that their bores are only very slightly larger (4.01mm) than the nominal 4mm of the Axles, so there is no hope that the actual Axles, with their thickened ends, up to 4.10mm, will

ever be usable with them. The maker's logo is 'GOSH!'. • **Grub Screws** are provided for the new parts, but they have an ordinary screwdriver slot, so the crosshead 'Driver in the Set won't fit them. • The new **Bolt** is 19mm u/h, and the diameter of the head is 7.0mm. The **Spring Washer** is black and only 6.2mm o.d.

Inventory. The Set has 115 N&B & 115 Spring Washers to go with them. (WISDOM etc never had any Washers of any sort.) So that leaves 107 other parts and the main ones are: a 3*5h Flanged Plates & 2 Flanged Sector Plates; 32 Strip parts; 4 Flexible Plates; 20 small Brackets, 10 Trunnions & 6 Flat Trunnions; 4 Road Wheels; a Pinion, 2 Gears & a Worm; and 2 each Threaded Coupling & Collar. No Pulleys or other bossed parts are included.

Models. Unlike the others, this Model Leaflet has the identification 'Instructions for 455/007' in small letters at the bottom of the front page. The 6 models comprise a Helicopter, an Aeroplane, 3 Buggies/Racing Cars, & a 'Robotic Arm', and all incorporate the Motor. Like the Helicopter already mentioned, the design of the Aeroplane in the detailed instructions differs from the pictures of it on the front of the Leaflet, and the box lid. None of the models can really be said to be good in either appearance or design. A geared drive is used in all cases, usually with the Worm on the Motor shaft mated with the Pinion, and followed by one or two Gear Wheels. As an example of the bad design, meshing often depends on a Strip, in which a Gear's Axle runs, being positioned correctly, even though it is held by a single N&B at one end. Shown below are the Go-Kart, perhaps the best looking model, and the Robotic Arm, which could better be described as a Motorised Shovel.



'New' System TECHNO Before leaving the Chinese scene, the small set shown overleaf was sold last year on the German eBay. The lid is blue with the name in yellow, and the main model is on a red/yellow panel. In the original the parts can be recognised as being clearly the Chinese WISDOM type, but in the MECHANIC/MECHANIX colour scheme, though it's not clear if the red is metallic or not. The Flexible Plates are white. Not all the parts can be seen but the contents are probably similar to a WISDOM No.0 because all 4 models on the lid are the same, or very similar to, those in an old 'r/g' No.0 Model Leaflet. The name at the bottom of the lid is REMUS, perhaps the name of a German store? And if so is the TECHNO name special to them?

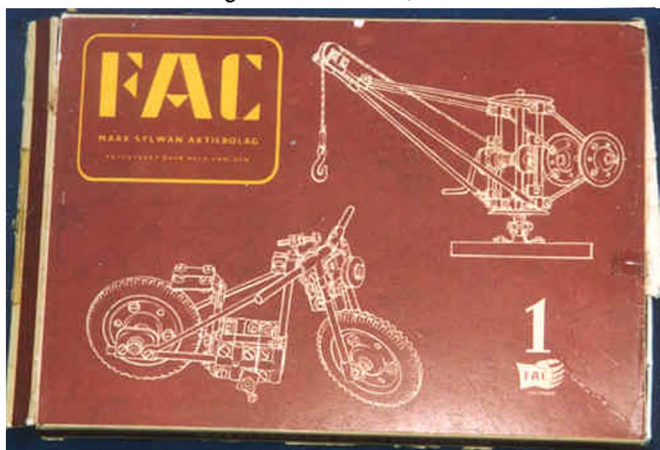


The 'Basic' Indian MECHANIX Set This is a smaller version of the Junior outfit described in 22/627. The box is smaller, 33*21½*3½cm, but the packaging is similar, and the EEC label again has © 1997 on it. The Item No. above the(stuck-on) barcode is 055/091; for the Junior it was /093.

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

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

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

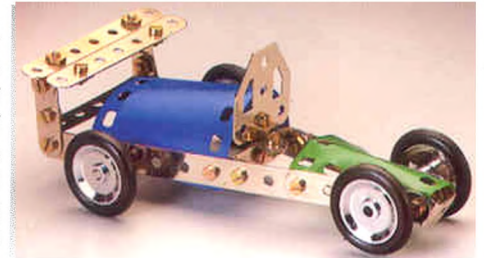


OSN 24/712

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

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

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

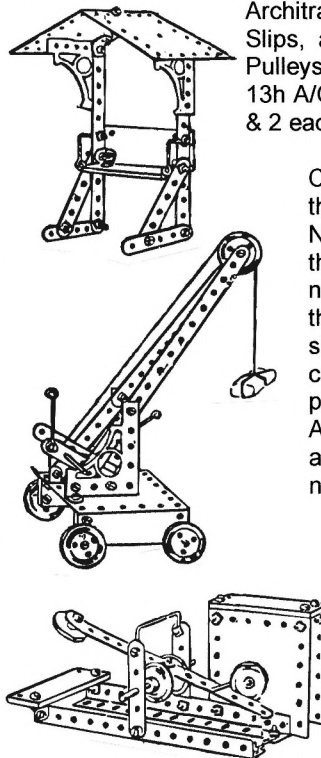


PRIMIUS OUTFITS A, B & C David Hobson kindly gave me a photocopy of the Model Leaflet for these small sets, hitherto only known by name. They are thought to have been introduced in 1924, no doubt in an attempt to boost sales in the face of difficult times for the company.

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

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

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



LYNNCRAFT Some notes on this small American system were given in 12/309, and now more details are available thanks to Chris Freeman who has sent photos of his two sets. The first, a No.146, is the one that was illustrated in OSN 12 except that it has a Pulley Disc between the centre Trunnions, and another 4, perhaps missing in Richard's set, one in each of the other gaps between the Trunnions. The Pulley Disc has not noted before – it has a normal size centre hole but otherwise two joined by a boss would make the Pulley. The 5 Pulleys between the Trunnions in the earlier 'large' set noted in 19/554 are genuine Pulleys but the other two (at the sides) can now be seen to be Pulley Discs.

The other set, a No.136, is smaller, and is in a box about 13½*8½". The lid (below) is of similar design, red & yellow to the No.146, but the two main models on it, and 2 of the 4 at the bottom, are different. The model sheet is again a blueprint stuck inside the lid. Several of the models are wheeled vehicles and all their wheels have Tyres, unlike those of the OSN 12 No.146. Oddly, although several of the models have 4 wheels, there are only 2 Tyres for the 4 Pulleys in the Set, and it isn't obvious where more would be housed. The other main parts are 6 Strips, 1 each Small & Large Flanged Plates, 4 each Trunnions, Triangular Plates, & A/Bs, a Span'driver, & 2x 3" Axles.



The Nuts in the above sets are square, with about the same A/F dimension as the hexagonal ones of OSN 12. I've also been able to examine some parts which Frank Beadle kindly lent me, and the first thing is that the holes are 4.8mm Ø, and not the (erroneous) 3.8 of OSN 12. Other points: • The Tyres are marked LYNNCRAFT on one side-wall. • The Axles are plain steel, as they are in the No.136 above. • The Bolts have smaller, ¼" Ø, roundheads.

The Pulley Discs mentioned above are a bit of a puzzle because they are not used in any of the models. However, they do make the sets look more attractive in their boxes, and they would have decorative uses in models.

.....

And two MICKEY MOUSE Sets Recently discovered thanks to Kendrick Bisset & eBay, the two LYNNCRAFT sets repackaged under the name MICKEY MOUSE Assembly Sets S & L (small & large no doubt).

First the **S Outfit** from Kendrick, which is in a box the same size as the No.136 above. The blue on red lid is shown below, and the models on it, and the general layout, are the same as in the LYNNCRAFT one above. Likewise



the blue Model Sheet pasted inside the lid. The company name, 'Hollywood Toyecraft Inc.', is printed on the ends of the lid, & 'Copyright Walt Disney Productions' on the top.

The parts are again on a red backing board, but with a slightly different arrangement to accommodate 2 extra A/Bs & 4 Pulley Discs. There appears to be slots for another 4 Pulley Discs, while loose in the Set as found were an A/B, & the extra 2 Pulleys with Tyres that are needed to make the models shown. This Set too has square Nuts, 8.7mm A/F.

The L Set details come from a blurry eBay photo. The colours are those of the smaller Set, and all that can be seen of the lid, the top centre, has Mickey as on the S lid with the models from the No.146 LYNNCRAFT lid on either side. The layout of the parts is similar to the OSN 12 set but with Pulleys or Pulley Discs between the Trunnions, as there should be, and 5 Triangular Plates, instead of 3, at each side. 3 of the 4 Pulley with Tyre positions are empty and the 4th has a Pulley but no Tyre. The models on the Sheet inside the lid are the same as those in the OSN 12 lid except that to make way for the larger top centre logo, the positions of the Draw Bridge, Bar Bell, & Teeter-Totter have been changed. Where appropriate wheels are shown fitted with Tyres (shown as white rings).

One wonders that a large organisation like Disney was content to see its best known star linked to what must be regarded as a less than ideal constructional toy. Another such case was M&S selling BILDICO (see 16/440).

More on STABIL INVENTOR'S Manuals Further to the notes in 23/654, Werner has now found full details of the 5 known Inventor's manuals.

No.1 This was mentioned in 14/370 and was the first manual described in 23/654. The front cover (with the Log Saw & 3 children: cover 'A' for reference) has Juni 1925 on it, and it is believed to date from then. C3 is blank.

No.2 This has the same C1 as No.1, with the Juni 1925 date on it, but is thought to date from the end of 1925. The contents are as No.1 but with additional pages 34-44, and p44 is on C3. These new pages are those described for the 1926 manual in 23/654.

No.3 This is thought to date from 1926 and is the 1926 manual of OSN 23 - it is identical to No.2 above apart from a different front cover, with 2 boys. Crane, Bridge, etc (cover 'B'), and overprinted 'Nr.57 u. 58' in the oval.

No.4 This is the third manual described in OSN 23. It is identical to No.3 above except for the Nr.56 model pages I-XII glued in, and the label on the front cover saying that it is for Sets 56, 57, 58 (cover 'C'). Because of the reference to the Money Box on pl of the Nr.56 section, the example known has been dated as ≥1931. In passing it should be noted that the Contents for Set 57 & 58, in the main pages, had not been updated to include parts 83,a,b, which by 1931 were included in the Sets.

No.5 This is a new find, a single sheet folded to give 4 STABIL manual-sized pages, and was probably included in the first No.56 Set, now known to have appeared in 1927. There is no main title or introduction, just 'Einige Anwendungsbeispiele für [loosely 'Some examples of models for] Walther's Erfinder-Baukasten Nr.56' along the top of each side. 6 models, Nr.801-806, are shown and all are in No.4 above, but with different numbers and one change of name: Pappschere instead of Pappenschneidemaschine. The first model is Nr.801, Observatorium, & the last, Nr.806, Steindruckpresse.

ARMATURE On the question of whether the parts from this system are made from wood or metal (see 23/655), Jeannot Buteux wrote to say that they are definitely not wooden, and are almost certainly aluminium.

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

ITEMS FROM LETTERS

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



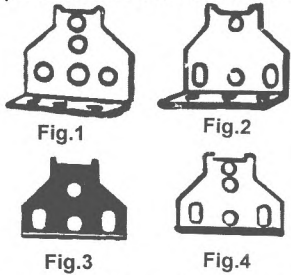
instead of the broad, early MECCANO type shown in STRUCTOMODE manuals. The parts nicely filled the compartments in the box, with the Motor fitting into a full-depth section, and raised level packaging in the other sections.

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

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

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

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



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

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

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

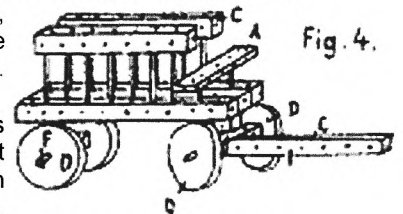
• Were the **STEEL ENGINEERING** Curved Girders the same curvature as the equivalent **ERECTOR** parts D & E?

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

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

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

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



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

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

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

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

on the AMI-LAC, Eitech, & Dickie-Schuco sets in the next Issue.]

4. On **PRINCE WILLIAM** (23/679), Tony Press sent the photo below of Jack Little's Loco & Tender, standing in front of the Loco's box. The main parts, including the Loco's Undercarriage, are green, with red Wheels, Boiler Supports, Coupling Brackets, and Saddles for the (brass) Chimney & Steam Dome.



5. Thomas Morzinck sent the photo below of Dr. Griebel's **KÖSTER Goods Train** (23/679) on 0-gauge track. The sides of the Loco are green and those of the Wagons red. The Loco roof is grey and all the Strips are black.



6. On the claimed Aug. 22 1922 patent for **STEEL ENGINEERING** (23/666-7), David Hobson has found that the only 'toy' patent of that date was No.1426376 to A.C.Gilbert, but it related to 'square girder construction', not **STEEL ENGINEERING**. It was originally filed on 2 Feb. 1915.

7. On the **AMI LAC** Gearbox Plate (23/659, John Hanby wrote that it wasn't available when he asked Guiseppa Servetti about it in around 1968. The MÄRKLIN part was

shown in a June 1967 List but by 1969 it had been deleted, along with over 20 other parts.

8. From Dan Farmer, St Paul, Minnesota, 'Hello! I just found your website. My grandfather, Weston Farmer, created the **BUILD** erector set back in the mid '40's. My father has told me stories about how he & his four brothers would sit around creating the models that were eventually used in the manual. Quite apart from **BUILD**, my grandfather was a world renowned naval architect & writer. He even worked for Walt Disney in the early days, and I recall actually throwing out some Disney 'cells' as a teenager when helping my grandparents clean out the summer cabin!

The reason I went online looking for references to **BUILD** is that my father just sent me a complete **BUILD** set. Of course, **BUILD** was a small player, with Gilbert at the top of the heap, and ironically I think it was my grandfather who bought me the Gilbert **ERECTOR** set I played with as a child. But I'm pleased to find that **BUILD** is still remembered and mentioned on several web sites.'

[**BUILD** was a small system of some 36 parts, but with some unusual features. It is shown in MCS and I hope to include some notes on it in OSN at a later date.]

9. From Jacques Pitrat. 'I have found an ad for the French system **MOBILO** in the 18 December 1919 issue of the weekly 'Sciences et Voyages', and it is likely that the system had recently come onto the market at that point.' [See 20/581 for a note about **MOBILO** Wheels.]

10. From Orion DreamDancer. • Photos of a **Super GIRDER BILT** Set which match the one described in 19/555 except for the N&B. They have the same 4-40 thread, but the Nuts are brass (again 1/4" A/F), and the Bolts, 5/16" & 7/8" u/h, are steel (perhaps brassed) with respectively round & fillister heads. [A set shown on ebay seemed very similar except that the background colour of the tubular container was light brown instead of the red of Orion's set & those described in 17/467 & OSN 19. No Spanner could be seen and the Screwdriver was a 'commercial' type with a clear yellow plastic handle. The Bolt heads were too blurry to be clear.]

• 'The manual from a **STEEL TEC** No.4 Set corresponds to the one mentioned in 11/277, and is #7021 dated 1993. The Dump Truck is the only model in the No.6 which uses the 6*8 & 6*5h Plates in that outfit, and they are not in the No.4 Set or the #7021 manual.'

EXTRA MCS SHEETS Each Sheet costs 15p + postage if the whole batch as listed in each Issue of OSN is ordered at the same time. That makes £3.30 for the 22 below, plus postage. For all other purchases each Sheet costs 20p + postage if copied double-sided like the originals, but 7½p per side + postage if copied single-sided. All back Sheets can be supplied.

MCS Amendments, List No.9 [1 Sheet]

BIG-JOY: X1.1,5,6,4/5a/6a [2 Sheets]

BILD-A-SET: X1.2/5,4/5a/6 [1 Sheet]

CONSTRUCTOR [0]: X1.1,2,4,5 [2 Sheets]

CONSTRUCTOR [1]: X1.1,6,a,b,3/4c [3 Sheets]

ELECTRIC: X1.7,a,b,c [2 Sheets]

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

METALCRAFT 'LYONS': X1.4b/5a,5b/6a,4c/5c,5d/6b,
5e/6c,5f,4d/5g,7 [4 Sheets]

MICKY MOUSE: X1.1,2,5,7 [2 Sheets]

MOKO'S SIMPLEX: X1.1,2,4/5,5a [2 Sheets]

PRIMUS LOCOMOTIVE: X1.3a/4a [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 2001 (OSN 24 and 25), 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. Insertion guaranteed in OSN 25 if ads reach the Editor by the end of JULY 2001.

PAYMENT Please make cheques etc payable to P.A.Knowles. Remittances should be in Pounds Sterling, or U.S. Dollar bills (at an exchange rate of £1=\$1.60). Other currencies are acceptable in principle but bank charges in converting them to Sterling are usually prohibitive. 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.

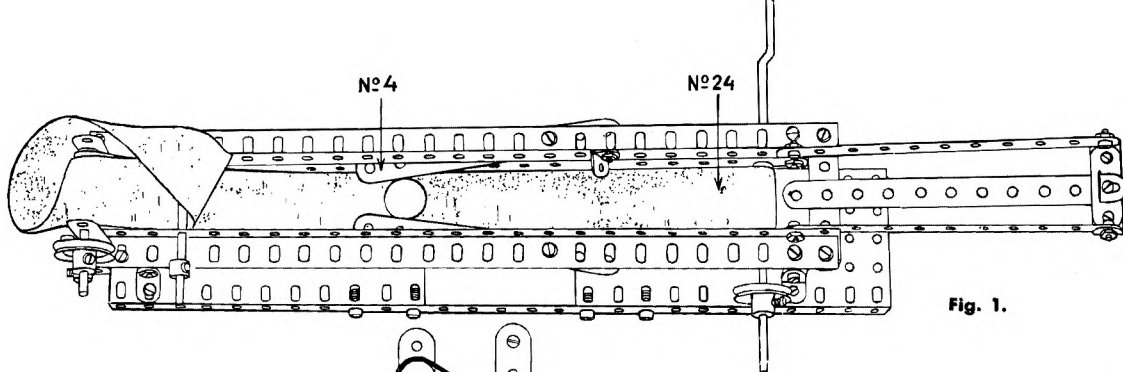


Fig. 1.

Turn to pp 708-709
for details of
konstruktionslådan
X

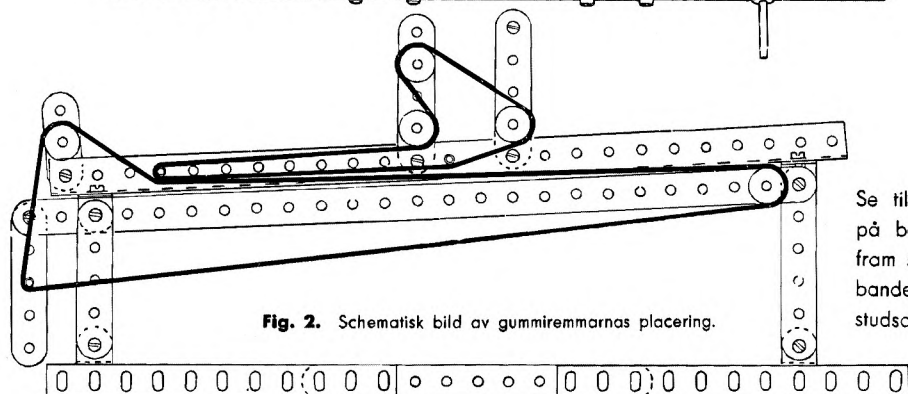


Fig. 2. Schematisk bild av gummiremmarnas placering.

Se till att styrjärnen nr 4 styra kulan mitt på bandet, som framgår av fig. 1. När kulan kommer fram studsar den upp i rännan och rullar ner och in under bandet för att sedan på nytt studsa upp. Om kulan skulle studsa åt sidan kan detta hindras med en pappskiva.

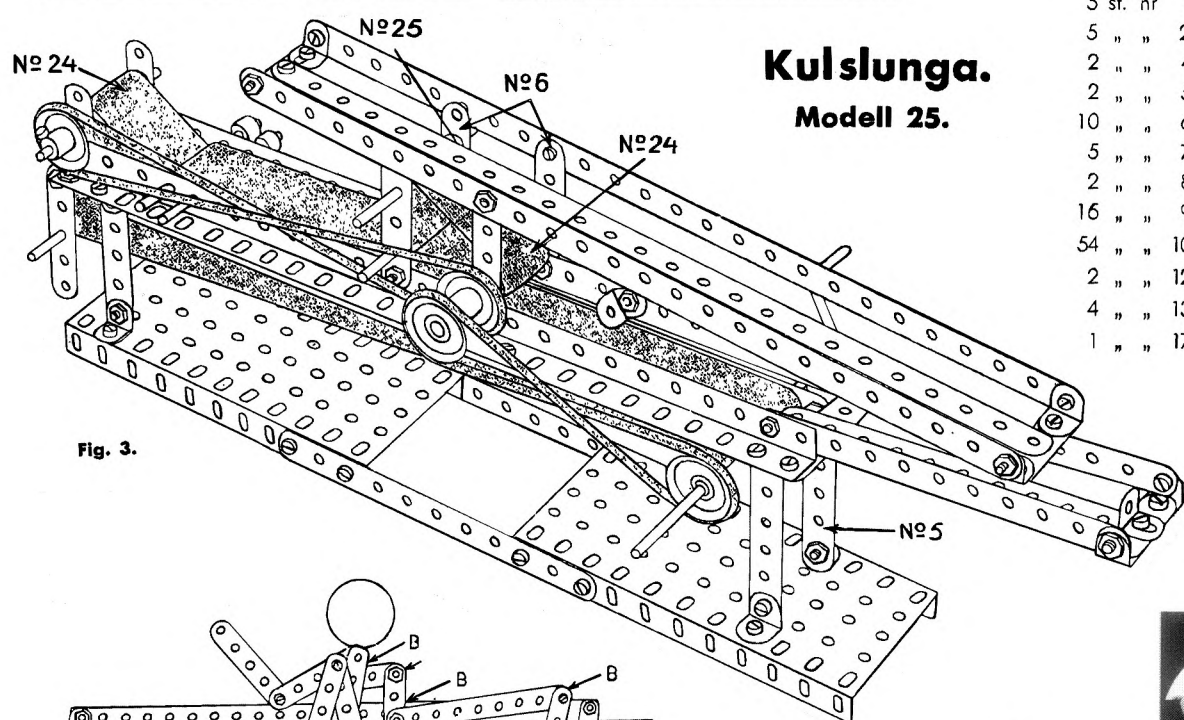
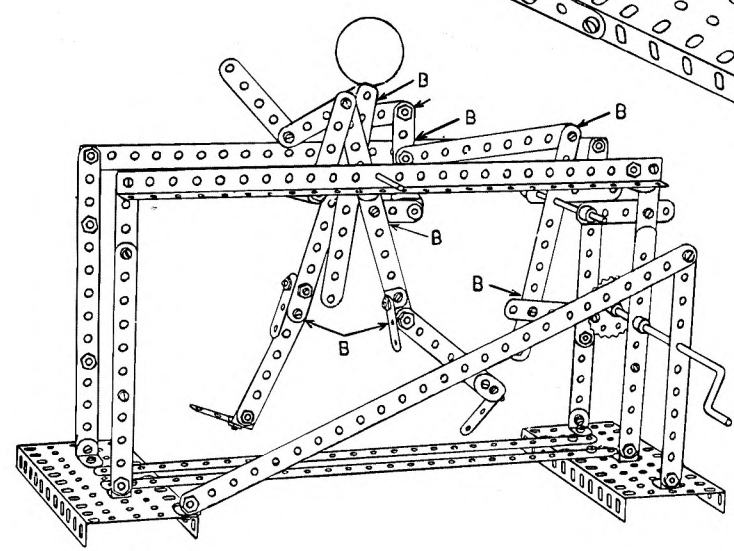


Fig. 3.

**Kulslunga.
Modell 25.**

Detaljer:

5 st. nr 1	1 st. nr 18
5 " " 2	5 " " 19
2 " " 4	1 " " 21
2 " " 5	3 " " 24
10 " " 6	2 " " 25
5 " " 7	8 " " 27
2 " " 8	1 " " 28
16 " " 9	1 " " 30
54 " " 10	1 " " 31
2 " " 12	1 " " 32
4 " " 13	2 " " 34
1 " " 17	



Detaljer:

3 st. nr 1	18 st. nr 9
8 " " 2	59 " " 10
4 " " 3	2 " " 12
2 " " 4	1 " " 15
2 " " 5	2 " " 17
8 " " 6	1 " " 21
6 " " 7	8 " " 27
2 " " 8	7 " extra muttrar.

**Löparnisse.
Modell 24.**

Huvudet ritas på kartong och klipptes ur.