

**EDITORIAL** A record 25% or so of subscribers sent comments on the 'new' OSN, and reactions were mixed. Nearly all liked the colour & the better quality B&W photos, but over half strongly regretted the passing of the folded, double-sided, stapled sheets. To them I can only say 'me too', but I'm afraid that single-sided A4 is the only practical way I can see of continuing to produce the N/L. No one mentioned the increased price, the new rates are given overleaf.

One point of detail. For my convenience all the pages of the last N/L were collated face up so the wide margins were to the left & right on successive sheets. The idea was that the recipient would turn over every other sheet so two printed sides could be seen at a time with the wide margins innermost (and then two blank sides, etc). This seemed a good idea but not everyone thought so, and I have found myself that more often than not I open to blank pages and then have to turn over a page to see a page number (Sod is alive & well). It would be easy to have the wide margin on the left on all pages and if you feel strongly about this, one way or the other, please let me know.

On another matter, several readers have reminded me that my OS Database is now very out of date. Perhaps I'll be able to produce a new version in 2004 and I'd be glad to hear if anyone has thoughts about improvements to it. Bear in mind though that new material will increase its present 44 pages considerably.

## FROM READERS

1. From Don Redmond. On **THE CONSTRUCTIONER** (9/206, 26/779), the hole spacing between the 2 centre lengthwise rows of holes in the Plates is  $\frac{1}{2}$ " instead of the standard  $\frac{7}{16}$ ".

### THE CONSTRUCTIONER: S1

[29/845]

2. From Don Redmond, some additional notes on **Phase 2 MODELIT** (see 15/186) from a recently found Set E. The Gear does have 50 teeth and meshes with the 16t Pinion at 2h centres, giving a DP of 38, as in Phase 1. There are no Sprockets in Set E, but a 45" length of Chain was found in it which appears to fit over every other tooth of the Gear. Its pitch is .18". Strips are 10.5mm wide. Both arms of the A/G are 14.5mm and in each the holes are toward the edge. Some Crank Handles have a hole  $1\frac{1}{2}$ " from the bend (like the Phase 1 parts, see 8/186) but others, if they are genuine, don't.

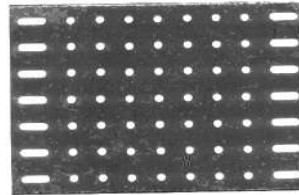
### MODELIT (b): S1

[29/845]

3. David Hobson showed me a French **CONSTRUCTOR** lot of parts, and they seemed to fall into two groups. The first correspond to those for the 'Early to Mid 1920s' shown in 24/701, and the Strip parts are 8.0-8.1mm wide, very near the 8.2mm of Period B.

In the second the Strip parts are 10.1mm wide and so are nearest to the 9.8mm of Group D. They generally correspond to those described for 'About 1930' in OSN 24 except for the Flanged Plate. It has the usual feet at the corners but is 9h long instead of the later (presumably) 11h

type, and its ends, and end holes, are extended by about 6mm. Below a plan view – the length overall is 112mm (120mm for the 11h type) and the slots are 10.6mm long. The flanges are similar to the 11h type but the end slots match those on top and the depth along the sides is a little less, typically  $9\frac{1}{2}$  against 10mm. Of the Lozenge parts only some



$\frac{1}{2}$ -Lozenges were present and these, and the Flanged Plate are dark red (like late 1920s MECCANO). The Strip parts, the 12h Wheel Disc, the A/B, and the flat Hook (as in MCS, 17.6mm long with a 2.7mm hole) are nickel. The brass parts are the Pinion (#25 in MCS, with 19t, Mod. 0.6), the Flanged & Grooved Wheel (#27, 32mm o.d., turned with a slightly tapered integral boss), and the Loose Pulley (#31, again turned, 22mm o.d., and 3mm thick).

3 Nuts found with the parts are brass, square, 5.6mm A/F, and 1.8mm thick.

### CONSTRUCTOR [1]: S1

[29/845]

4. Another lot courtesy David Hobson, this time the model leaflet and parts from a **MASTER BUILDER** No.25 set, complete except for 2 A/Bs, & a few Nuts. The Strips have the large radius ends noted in 16/450 & 19/554, and the thread of the N&B is 8-32; otherwise the parts are as described in OSN 16, but the following details may be of interest: • The holes are 4.3mm except in the A/B. • The end radius of the Strips is about  $\frac{7}{16}$ " and there is only 3mm of metal outside the end holes. • The 4h Wheel Discs are 24.0mm Ø and the holes are on a  $\frac{5}{8}$ " pcd (if the o.d. had been a little larger to accommodate a .7" pcd, the part could also have served as a corner bracket). • The A/B, typically 12.4\*12.6mm, is 12.4mm wide. It has a 4.5mm hole in one arm and a slotted hole 4.9mm wide & 7.2mm long in the other, both with only about 2mm of metal outside them. • The N&B are nicked, the Nut is square, 8.8mm A/F & 3mm thick, the Bolt has a roundhead, 7.6mm Ø, & is 6.6mm u/h.

The Model Leaflet is one sheet 203\*490mm folded into 4, & is nearly identical to the Wetzell one described in 16/451. The Intro, which couldn't be seen clearly before, speaks of 16 successive sets which build 95 models using 58 separate parts, & the address under it is 468 B'way, N.Y.City. It is identical to the one in the No.10 Leaflet in 16/451. The significant differences are that the front has no Acorn logos (on either side of 'THE' at the top), and has been rubber stamped 'REMOVED TO BUSH TERMINAL, BUILDING No.6, BROOKLYN. N.Y. Notes on the addresses & logo were given in 18/495.

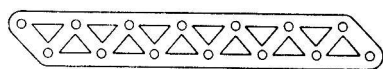
### MASTER BUILDER: S1

[29/845]

5. Notes from Don Redmond on **BUILD-X & DELTA-X** (see 11/288), and David Hobson lent me some of his parts. In OSN 11 I missed the fact that the bosses of some at least of the plastic circular parts have '**D**' section bores. Those seen are the 21mm Wheel, P-006, & the Compound Gears, P-003-5. The 19mm Pulley, P-008, has a normal circular bore though. The round Axles with my parts are most likely

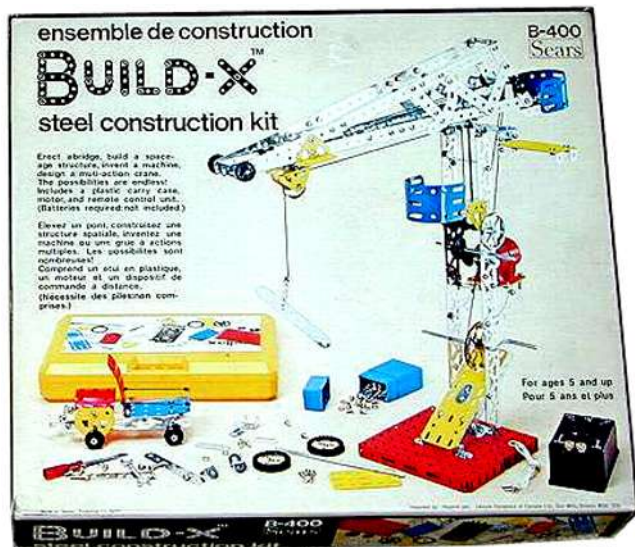
not original as Don's & David's are larger in diameter (to fit the metal bosses) and with a flat for the D bores. The diameters found vary from 4.20 to 4.23mm, and the depth to the flat from 3.69 to 3.74mm. In passing, the corresponding figures from a handful of Gabriel ERECTOR Flatted Axles are 4.03-4.06 & 3.38-3.63.

Other points on the parts. The **Gear P-005** has an o.d. of 20mm, and combines an 18t contrate with a 13t pinion (15.0mm o.d.). At Mod.1, the teeth are fairly coarse. The unusual **Braced Girder S-012**, (below) has, as might be



expected, its lengthways holes at 28.0mm pitch, and the 2 lines of

holes at 14mm centres. The plastic **Flexible Plates** have 'MADE IN JAPAN', moulded into them. The drum-shaped **Motor, E-002**, has a red plastic case with the 2 parts of the housing joined by the band in the middle; there are 2 screw terminals on the back, and a black pinion pressed onto the shaft.



Don also mentioned a **yellow plastic case**, above, about 28\*18\*5½cm, with a snap catch lid, and a BUILD-X

label on it. These boxes were used to house the parts in both BUILD-X & DELTA-X sets, from at least #200 upwards. Various labels have been seen, all in colour, some featuring a model from the set in question, and others a selection parts from the Set. Some labels have no Set No. on them and these at least would have been packed inside a cardboard box. One such box for the B-400 set is shown in the last column with its contents below it: a yellow case and a plastic block containing the E-002 Motor & E-001 Controller/Battery Box. The Motor appears to have a pulley on its shaft, though a pinion is shown in the instructions for the Crane. The blue plastic box on the left is M-002 for the N&B, etc. The B-500 set contains 2 of the yellow boxes. All the BUILD-X labels seen carry the Sears name.

#### BUILD-X: S1 & DELTA-X: S1

[29/845-6]

6. **MERKUR** sets were offered in an ad last Spring from Merkur, P.O.Box 25, Melton Mowbray, Leicestershire, LE13 1ZG, tel. 01664 485029.

#### MERKUR: S1

[29/846]

7. One of the 'goodies' on Werner's web site (see Web Sites below) is a full account of the **KNIRPS** sets, adding to the notes in 11/272, 24/714, & 25/743. Some of the details follow. The No.1 was launched in 1932 to compete with TRIX, and at the same price, .50 Mark. The contents were quite similar too and, updating the estimates in OSN 11 & 25, comprised: 2,4,2,2 of 3,5,7,9h Strips; 2x 1\*3\*1 DAS; 4 Wheel Discs; 3 Screwed Rods; 8 Bolts & 16 Nuts; a Span'driver, and a Crank Pin.

The parts were packed in an envelope and every part in the Set was shown on the front of it. The envelope was in a large box (like TRIX), 18\*12\*1.5cm, with a label similar to the No.48 manual cover in OSN 25, but without the words along the top, and with KNIRPS Nr.1 in the diamond bottom right.

The **Crank Pin** (Kurbelbolzen), right, is 17mm long, and about 2mm diameter, to pass through the small holes in the Wheel Disc. The shoulder near the end is like the ULOX part and would allow the Pin to be held between 2 Wheel Discs, though its use isn't made clear in the KNIRPS model leaflet.

Some details of the latter were given in OSN 25 but all of it is shown on the web site.

Another point of interest is the No.1a linking set. It was also priced at .50 Mark to compete with TRIX and the No.2 cost 1 Mark. But the No.2 didn't include all the parts in the No.1, the Wheel Discs for example, and so buying a No.1 & a No.1a, at .50 Mark each, gave appreciably more parts than buying a No.2 at 1 Mark.

#### KNIRPS: S1

[29/846]

8. Good news from Werner Sticht. Urs Flammer has told him that **Stokys** has new owners, Mr Herbert Schulthess & Mr Mauro Matesco, and they will continue to produce STOKYS parts & sets. The address of Stokys AG is now Wihelstrasse 9, Walchwil, Switzerland, CH 6318.

#### STOKYS: S1

[29/846]

9. Kendrick Bisset has discovered that the **thread used in U.S. produced MECCANO** is the American 7-32 instead of

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the Liverpool  $\frac{5}{32}$ " BSW. In round terms 7-32 is 4 thou smaller in diameter and despite the difference in thread angle between the two (see 7/160), 7-32 Bolts & Screws can be used in BSW tapped parts, bosses for instance. They are a little loose but tighten satisfactorily. This means that 7-32 Bolts/Screws would fit bossed parts imported from England.

It is believed that 7-32 was the thread in all the U.S. produced parts, that is from 1922 onwards, but it also seems likely that 7-32 Bolts & Screws were used from as early as 1916. This could possibly have been to circumvent wartime shortages. It is also possible that certain parts were made in America before 1922 and used 7-32. An example is the 56t Gear with the square centre hole & zinc boss (see Mystery Part No.45, in 27/795).

7-32 was used in the 1929 Gilbert 'double-digit' MECCANO sets (see 27/788) but from 1930 onwards ERECTOR threads were used, 8-32 N&B, and 6-32 tapped bosses.

#### U.S. MECCANO: S1 [29/846-7]

10. On the **No.0 KWIK BUILDER** set in the 1<sup>st</sup> column of 28/827, Harry Marien has succumbed to temptation and opened the envelope with the parts in it. The contents are 2,6,2,2,2,2 of 7,6,5,4,3,2h Strips; 4 each of 1\*3 & 1\*4h 'Plates'; 6 A/Bs; 10 N&B; and a Spanner (as in the No.1). The 3-7h Strips are green, the Plates red, and the other parts are bright looking. The contents are as in the photo in the Set's manual (described in 10/262) except that the 1\*4h Plates replace the 1\*5h, and the 4 Washers, & 5 of the 15 N&B, shown in the Manual are lacking. (The set contents of No.0 given in OSN 10 was incorrect, it is now apparent that the DAS and the 'small Plates' are actually 4 each of 1\*3 & 1\*5h 'Plates'.)

#### KWIK BUILDER: S2 [29/847]

11. Some more information on an **MKA No.II set**, from Jacques Pitrat, see 28/830. The colour of the manual (with a '2') is cream rather than light yellow and it has 8 pages, plus the covers. There are 8 models, one on each page, from a 'Schiebekarre' (Luggage Barrow) to a 'Dekopiersäge' (Sawing Machine). There is only one Flanged Sector Plate in the set, and only one is used in the manual models. There are two 27mm Pulleys, without Tyres, and Tyres appear in the manual, as in the Set, only on the 36mm Pulleys. There are no backing cards in the set, and it is not sure that there were ever such cards. The aluminium clips are used to hold the Strips of the same size together.

#### M K A: S4 [29/847]

#### WEB SITES [29/847]

- <http://home.t-online.de/home/HGFinke/metall/engl.html> (from Thomas Morzinck). A German **MÄRKLIN** enthusiast shows pictures and gives some details of his models and mechanisms. In English.
- Werner Sticht has revised his **STABIL web site**, [www.stabilbaukasten.de.vu](http://www.stabilbaukasten.de.vu). Many new items have been added, others have been expanded, and there are additional interesting photos. The new material includes more on the history & parts; on the motors; the Inventors Sets; the Kanonen Sets; the Railway Wagon Sets; the small Sets 46, 48, 48M; the Knirps Sets; and the years up to 1920.
- [www.Merkurtoys.cz](http://www.Merkurtoys.cz) (from Orion DreamDancer). There is an English version of this **MERKUR** site, and now included are new or revised manuals for sets 012, 014, 019, M4, & M6. All manual pages can be viewed/printed.
- [www.bral.biz](http://www.bral.biz) The new **BRAL** site. It is in Italian but is easy to navigate. More details elsewhere in this Issue.

#### QUERIES [29/847]

**Query 29** On the colour of STABIL Cord, Werner Sticht wrote 'that blue/white Cord (two coloured strands twisted

together) was used in the 1950s & 60s – I remember it very well from my first STABIL set that I got in 1957. Plain white Cord was used in sets from the 20s and 30s.'

#### SMALL ADS [29/847]

**Wanted.** Any metal nut & bolted together **constructional car or vehicle kits**, or any parts, boxes, manuals, information (see 28/814). Also PRESTACON Tool/Kits.

Please call Gary on 01635 200460 before 8pm or email me at [gary2car@aol.com](mailto:gary2car@aol.com).

**MÄRKLIN 1089 Eiffel Tower set, illustrated instructions needed**, or colour copy, or mono. Happy to pay for copying or full value if original. Graham Colover, L'Escale, Barnet Lane, Elstree, Herts, WD6 3QZ; tel: day 0207 6258899, home 0208 9538143; fax: +44 (0)207 6258866.

#### For Sale CD VERSION of MCS - MECCANO VOLUME

A completely new edition of the Meccano Volume of the MCS has been produced on CD in .PDF format (Adobe/Acrobat Reader is needed). It has been thoroughly revised and updated to the present, with many colour images and consists of over 1100 pages. The format is the same as the normal MCS. The Adobe/Acrobat Reader will be included on the CD (for Microsoft PCs), although it is also available as a free download from the Adobe website for virtually all operating systems. Price including postage for the CD will be as follows:-UK - £5.50; Europe - £6.00 (10 Euros); Rest of World - £6.50 (US\$11). Send cash in UK£, US\$ or Euros, or UK£ cheques drawn on a UK bank to Mr. T Edwards, 5 Burnside Road, Largs, Ayrshire, KA30 9BX, Scotland, Great Britain. Email - [timothy.edwards1@btinternet.com](mailto:timothy.edwards1@btinternet.com). Website - <http://edwards.web.users.btopenworld.com/meccano.htm>.

#### REVIEW: CD of MCS MECCANO Volume [29/847]

Some details of this new version of Frank Beadle's original are given in the ad above. For those unfamiliar with Frank's tome it covered MECCANO in Argentina, the U.S.A, Brazil, the UK, France, Germany, Mexico, & Spain, with one or more sections for each, some 400 pages in all.

What Tim has done is to scan Frank's original pages, updating them where possible, and then add all the fresh material he has been able to obtain, in colour where appropriate. There is quite a lot of it actually, with over 1100 pages now, a labour of love indeed. The format is unchanged and also the countries covered, but apart from Brazil & Germany, there are significant additions to all the countries, and huge ones for the U.S.A., the UK, France, & Spain. In each of these the standard & special/theme sets are all included with separate sections for each identifiable period.

This is an invaluable work of reference for all enthusiasts, and would be a 'good read' for anyone even remotely interested in the MECCANO story. Quite apart from the new material it is very convenient to have so much detail of MECCANO in one place. I'm not going to attempt to summarise the additions but I would like to mention that in the French section Tim has included all the sets produced since Liverpool closed. It's the first time this has been done as far as I know, and it was well worth doing now, before the details get muddled with time.

To allow quick access to any section a series of 'bookmarks' can sit permanently on the left of the screen, one for each country. Clicking on one of them gives a dropdown menu with a list of all the sections for that country, and then clicking a section takes one to the first page of it. It's very convenient to use but once in a section the only way to get to a particular page is by clicking through the preceding pages. This doesn't take long, even on my ageing machine, but can be a bit tiresome if one wants to cross-refer between 2 or more pages several times.

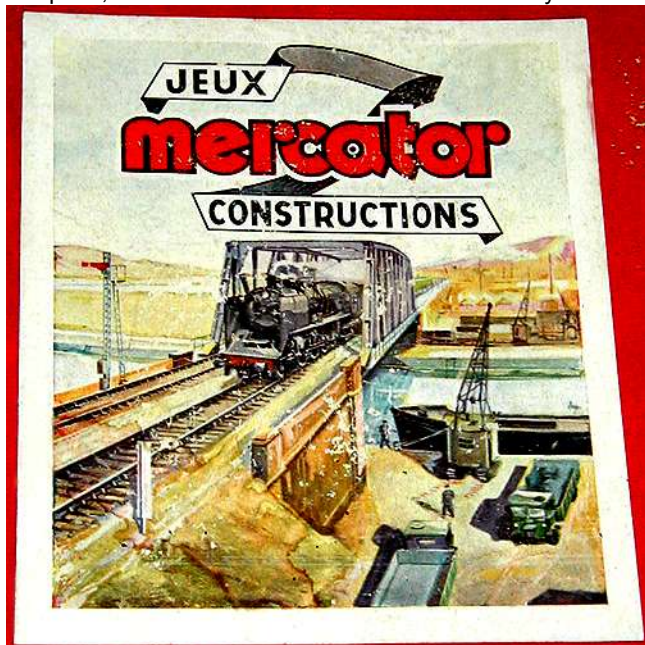
Of course if much use is to be made of a particular section it doesn't take long to print off the pages. Provision is made for double-side printing if required with a binding margin on the inner edge of the pages.

Tim has included a slip with the CD asking to be told of errors, & information to fill remaining gaps. More on MECCANO in Germany & Argentina would be particularly welcome.



**MERCATOR Mysteries** Following on from the notes about KWIK BUILDER in 28/827, I must again thank Harry Marien, this time for allowing me access to his MERCATOR material. This has shown that as well as the system in MCS there was at least one other completely different version of this Belgian system. The material available falls into 3 parts and will be assumed to be representative of what will be called Types 1, 2, & 3. It is thought that Type 1 probably preceded Type 2, and Type 3 may, possibly, be associated with Type 2 in some way.

**TYPE 1** The material here a No.5 set, probably fairly complete, and the lid label below is in the same style as the



manual cover in MCS, though with a different industrial scene. But the No.5's manual has an entirely different yellow cover, shown later.

**The PARTS** A list of the complete range of nearly 100 parts is included in the manual together with the Illustrated Parts, & both are shown on the facing page. There are some 40 parts more than in the MCS list and possibly the latter has been truncated. The sizes of the Poulies & Roues differ slightly between two. Notice also the 6-figure PNs in MCS, a possible indication that it is a later list. The illustration of the parts in the Manual is exactly the same as that given for MINIATOR in MCS, and it is explained in the Manual that it can be used for both systems. [MINIATOR is essentially a smaller version of MERCATOR but no parts are to hand.]

Below some notes on the parts, mostly about those in the No.5 set, and the quantities found in it are shown in curly brackets (it should have 363 parts). Dimensions not given are as in the Parts List.

• **The Basics** Holes are 4.9 to 5.0mm, with a few in Strips 5.1mm; their pitch is 13.0mm (but 12.7mm in MCS). Strip parts are 13.0-13.2mm wide and have fully rounded ends. Plates & A/Gs have square corners. The metal is .8 to .9mm thick in most parts, rather thin for the longer Strips. All holes are round except in the A/B. Unless otherwise stated Strips & A/Gs are dark green; Plates, Trunnions & Pulleys are medium red.

• 2,3,4,5,6,7,8,9,10,11,15h **Strips** {4 nickel,8,6,10,5,8,4,6,6,6,4}. **DAS:** 1h deep, 3,5,6h long {4,4,2 medium green}. **SAS:** 1\*4h {#53, 1 medium green}.

• 3 & 5h **A/Gs**, 13.8\*14.0mm typical {4,2, all medium green}.

• **Plates** 3\*5, 3\*9, 5\*5, 5\*9h {2,2,1,1}. **Flanged Plates**, with some slightly rounded corners: 3\*3h & 3\*7h {4,2 grey}.

• **Brackets.** A/B with 2 large-radius-ended slotted holes, 7.5 & 7.8mm long o/a {19 nickel}. **Double Bracket**, #40, only 13mm wide o/a {1 medium green}. **Double Bent Strip**, #65

## Leading Particulars of MERCATOR:

### Type 1, with Type 2 in square brackets.

**Name** MERCATOR

**Country** Belgium

**Maker** Mercator, 244 av. Van Volxem, Forest-Bruxelles. [?]

**History** To 1949. [possibly after 1949.]

**Hole dia.** 4.9 to 5.0mm, with a few 5.1mm in Strips [4.9 to 5.0mm.]

**Hole pitch** 13.0mm. [12.7mm.]

**Sets** Nos.1-8 with linking sets (ads for 3bis, 5bis, 7bis known). [Sets 4 & 6 known; they may be add-on sets. Also possibly Type 3 Sets 1-6 & A in another series (2-5 probably add-on sets)]

**Material/Finish** Steel. Dark green, medium red, a few parts grey. Some small parts brass, nickel or medium green. [Steel. Lightish red & green with nickel Brackets.]

**Bosses** Brass s/t M4, 10.0, 10.5, or 11.0 Ø. 5.0-5.1mm bore, 11mm deep. Rectangular section peening with 4 indents. The 18mm Pulley boss is tapped M3, or similar. [No bosses yet seen.]

**Fixings** M4 N&B. Nuts: hex, either machined brass or brassed steel, pressed; both 8.0mm A/F & 2.6mm thick. Bolts: either brass CH, 7.0mm Ø, 6.7mm u/h; or brassed steel, tapered CH 6.7mm Ø, 8.0mm u/h. [RH Bolts, and hex Nuts about 8mm A/F. No other details available.]

**Axles** Brass 4.9-5.0 Ø, & nicked steel, 4.9mm Ø. [Steel 4.5mm Ø.]

**DP** 25.4 (Mod. 1). [No Gears known.]

**Motors** none.

{1 medium green}. 7h **Trunnions & Flat Trunnions** {4,4}.

• **6h Bush Wheels**, #100, with .6mm thick disc, & the larger diameter #101; both with 11.0mm Ø bosses {2,2}.

• **Flanged Wheel**, #114, machined brass with integral 10.0mm boss. The tread is 16.8mm Ø & 3.7mm wide and the end face is recessed concavely between the bore and the outer diameter {4}.

• **Pulleys.** #105, **34mm Ø**, 6½mm wide, with 11.0mm boss. #106, **53½mm Ø**, 8mm wide, 10.5mm boss. **18mm Ø**, #111, 4.9mm wide, machined brass with integral 10.0mm boss tapped substandard size (M3 is very tight), {4,4,6,1}. **29.5mm Ø Loose**, #109, 5½mm wide over rim & centre belling, with 4 holes, about 2½mm, in face, and fitted with black **Rubber Rings**, 39mm o.d. & 6mm wide. It is very similar to the KWIK BUILDER part in 28/827. {6}.

• **Misc. Double Arm Crank**, #185, 10.5mm boss {2 medium red}. **Collar**, #180, brass, 10.5mm Ø & 9.9mm wide {3}.

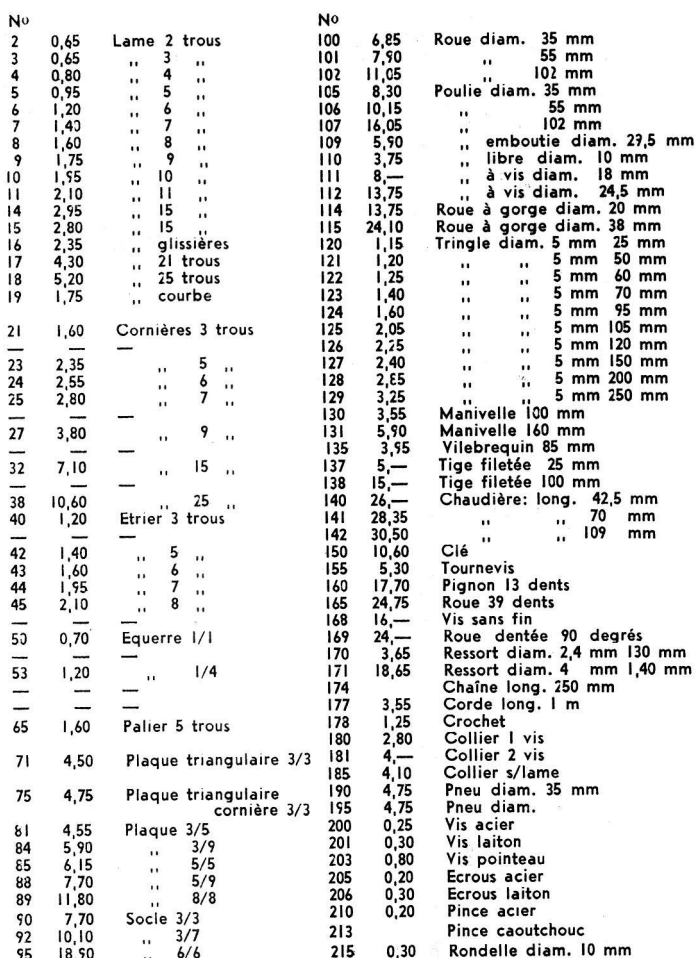
**Axle Stops**, #213, not illustrated, red rubber gone hard, 7¼mm o.d. & 4mm wide {8}. **Washer**, #215 {6 nicked steel}. **Spanner**, #150, nicked, 108mm long o/a, cranked 7mm at the straight end.

• **Axles.** Brass: 27,70,80,105mm long. (80mm is not listed.) Nicked steel: 60mm. {2,2,2,2,2} **Crank Handles.** Brass, 107 & 165mm long o/a, with handles offset 27mm {1,1}.

• **N&B.** Both brass & steel are listed (#200-2, 205-6); see Panel for details. {Brass: 39,45; Brassed steel: 38,38.} #203 is a steel **Grub Screw**, 4mm long.

• **Parts not in the Set.** The **Formed Strip** #14 is circular (in the photo it is on the right, around the Spring Cord #170 & 171). Don Redmond mentioned having a **Boiler**, 34mm Ø & 8h long, it would be #142. #172 & 173 (under the N&B) are not listed but look like short lengths of Spring Cord.

**The SETS** The manual has photos of Sets 1-8, and linking outfits 3bis, 5bis, & 7bis. Presumably there was a full range of linking sets, but no others are mentioned. The No.8 is housed in a 4-drawer wooden cabinet with just the name



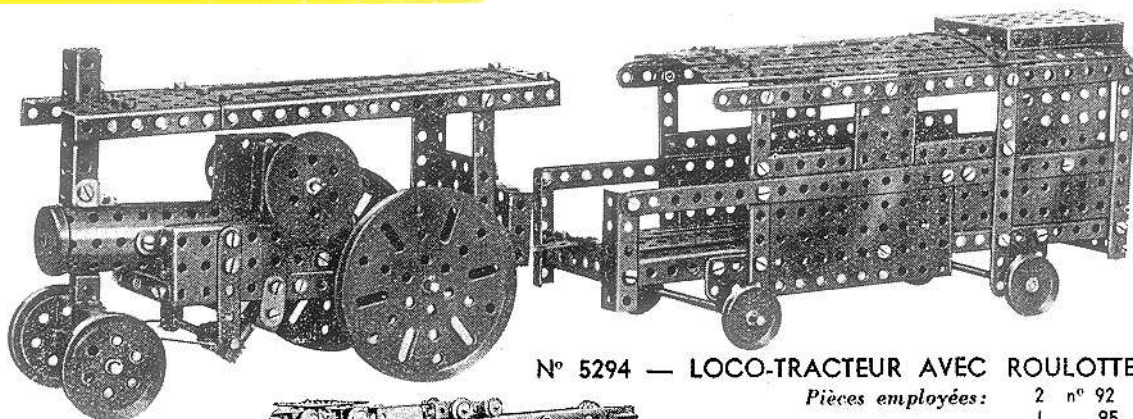
The cover, featuring 2 of the manual models is shown overleaf. Inside is a good selection of models for all the sets





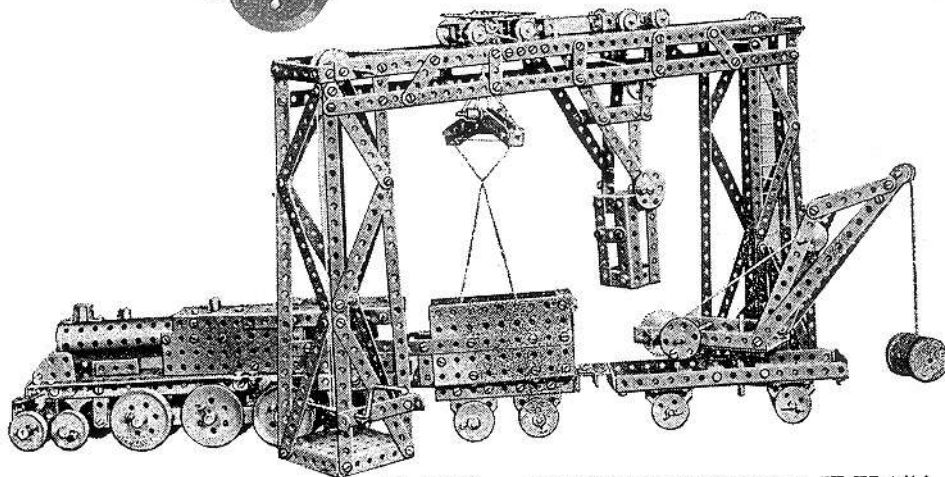
1-8, with a reasonably sized photo of each, and usually a parts list. Extra views are provided for a few of the larger ones, but even so considerable imagination would be needed to complete many of them. None of the models are at all complicated mechanically, but Gears are used in the No.6-8 models, and one Lorry has 'proper' steering, albeit Cord operated. Some models do though have better than usual lines. The Crane in MCS is a No.4 model, but with a different photo and none of the auxiliary views. Below are three of the models, actual size. The Tug & the Traction Engine are from the No.7 set, and the Crane with Train is a No.8 model. Also below one of the 5 'supermodels' that are on the back cover - a Giant Crane, '1.40m long & 63cm high' - the others are 3 Fairground Rides and another Crane.

There is nothing to indicate the manual's date but it looks

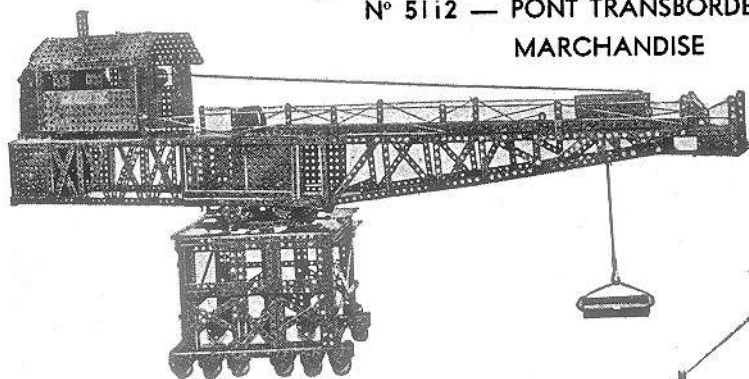


N° 5294 — LOCO-TRACTEUR AVEC ROULOTTE

| Pièces employées: |      |    |       | 2 | n° 92 |
|-------------------|------|----|-------|---|-------|
| 4                 | n° 2 | 2  | n° 27 | 2 | 100   |
| 8                 | 5    | 4  | 32    | 1 | 101   |
| 3                 | 7    | 2  | 38    | 4 | 105   |
| 6                 | 8    | 4  | 44    | 2 | 106   |
| 4                 | 9    | 12 | 50    | 2 | 107   |
| 3                 | 10   | 2  | 65    | 1 | 124   |
| 1                 | 11   | 4  | 71    | 3 | 125   |
| 6                 | 15   | 1  | 75    | 2 | 126   |
| 6                 | 17   | 2  | 81    | 1 | 127   |
| 6                 | 18   | 2  | 84    | 1 | 142   |
| 6                 | 23   | 2  | 85    | 1 | 160   |
| 2                 | 24   | 2  | 88    | 1 | 168   |
| 4                 | 25   | 4  | 90    | 1 | 180   |
|                   |      |    |       | 6 | 210   |



N° 5112 — PONT TRANSBORDEUR ET TRAIN  
MARCHANDISE

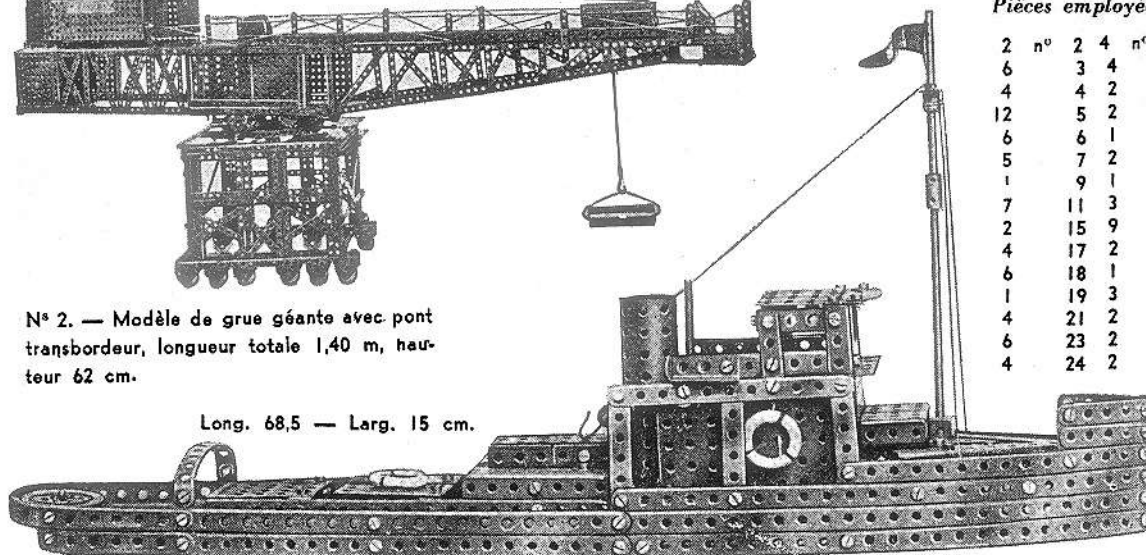


N° 2. — Modèle de grue géante avec pont  
transbordeur, longueur totale 1,40 m, hau-  
teur 62 cm.

Long. 68,5 — Larg. 15 cm.

N° 5284 — REMORQUEUR DE PORT

| Pièces employées: |      |   |       | 2 | n° 88 |
|-------------------|------|---|-------|---|-------|
| 2                 | n° 2 | 4 | n° 25 | 2 | 92    |
| 6                 | 3    | 4 | 27    | 1 | 95    |
| 4                 | 4    | 2 | 32    | 1 | 101   |
| 12                | 5    | 2 | 38    | 2 | 102   |
| 6                 | 6    | 1 | 40    | 2 | 120   |
| 5                 | 7    | 2 | 43    | 1 | 125   |
| 1                 | 9    | 1 | 44    | 1 | 126   |
| 7                 | 11   | 3 | 45    | 1 | 127   |
| 2                 | 15   | 9 | 50    | 1 | 142   |
| 4                 | 17   | 2 | 53    | 1 | 178   |
| 6                 | 18   | 1 | 65    | 4 | 180   |
| 1                 | 19   | 3 | 71    | 1 | 181   |
| 4                 | 21   | 2 | 81    | 1 | 185   |
| 6                 | 23   | 2 | 84    | 3 | 190   |
| 4                 | 24   | 2 | 85    | 2 | 210   |





early postwar with models of a Helicopter & the V1 Flying Bomb, and a sketch of a Lancaster bomber.

**TYPE 2** From this period is a No.4 outfit. Its lid label is shown below & its open box is to the right. Underneath 2 Ebay photos of the open box of a No.6 set, with the manual cover included in the right view. Its lid label is the same as that of the No.4 and is in the same style as the KWIK BUILDER one in 28/827, but with 3 boys instead of two, and also an electrical switch has been added above the top boy's head. As can be seen the manual has an identical picture on its cover - any such manual might shed more light on Type 2, & I'd welcome details from anyone who has one.

**The PARTS** They can be seen in the open boxes - their hole pitch is 12.7mm and they differ in other ways from the Type 1 pieces. Only the Spanner, A/B, & 4-hole Loose Pulley look similar, and equally they are like K W parts. And again they are the only Type 2 parts that are similar to K W.

No list of parts is available so below notes on the parts in Set 4, with the quantities found in the Set in curly brackets. After that what can be seen of the No.6 parts.

- **The Basics** Holes are 4.9 to 5.0mm, and all are round except in the A/B. The metal again looks fairly thin, the .9mm of the DAS is probably typical.
- **2,3,4,5,6,7,9,11h Strips** {2,2,2,4,2,4,6,4}. In a few the hole pitch is nearer 12.8mm. **DAS:** 1\*3\*1 & 1\*5\*1h {2,4}. The parts are 13.2mm wide (despite the pitch of 12.7mm), and have large radius ends.
- **A/B** with 2 large-radius-ended slotted holes; it looks very similar to the Type 1 & K W pattern, and may be identical {6 nickel}.
- **Pulley Disc**, 39mm Ø with 6 holes at 25mm pcd, and 2, 3.8mm Ø, at about 9½mm radii {4}.
- **Circular Plate**, 103½mm Ø, with 3 rings of 12 holes each at about 37½, 62, & 87mm pcd. Also 2 holes at 12½mm radii, and one at 9mm {1}.
- **Axles**. 4.5mm Ø steel with slightly rounded sheared ends; 55 & 81½mm long {1,2}.
- **N&B**. Steel RH Bolts & hex Nuts, about 8mm A/F.
- **Spanner**. Similar to the K B part, but 50mm long o/a (the

similar Type 1 part, #151, hasn't been seen).

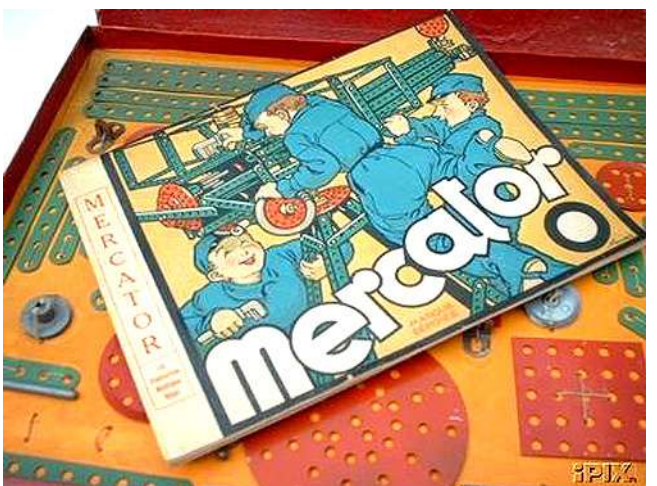
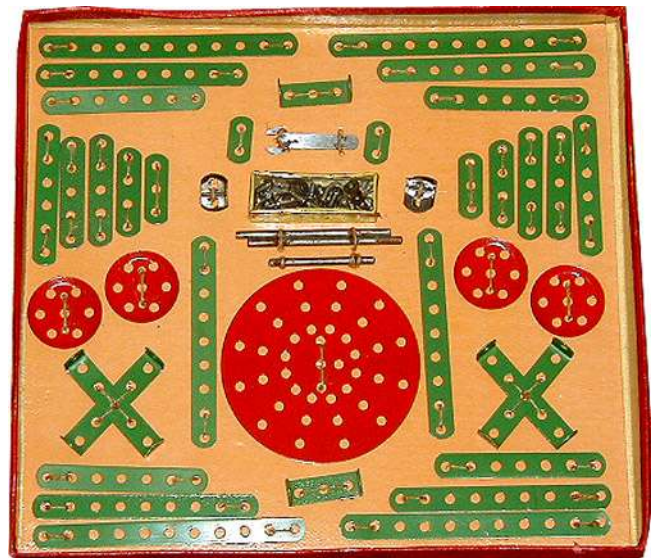
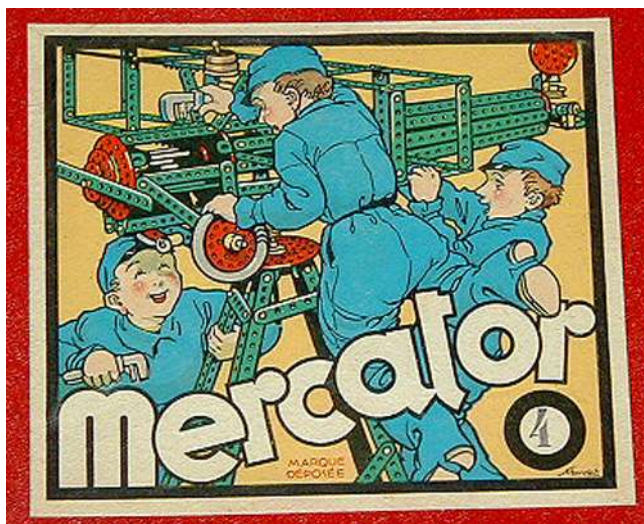
**Parts in the No.6 Set** The additional parts that can be seen are • 2x 15h Strips. • 5\*5 & 5\*11h Plates, with square corners as Type 1. • The 5h Ø Circular Plate with rings of 6 & 12 holes, and 2 extra, small centre holes like the Pulley Disc. • 4x bright Loose Pulleys like the Type 1 & K W parts. • A greyish bossed part in the bottom left corner of the box, perhaps a 2h Ø Pulley, and a similar but somewhat smaller part on the RHS. • 2 red Double Arm Cranks, one in each bottom corner. • 3 brass Collars. • A Crank Handle.

**The SETS** Judging from its contents the **No.4** is an add-on set. The box is red, 29¼\*32¼\*2¾cm and the label, already shown below left, covers most of the lid. The signature, bottom right, looks like 'X Hardez', though the first two letters are unclear. The parts are strung to the orange card with thin brown cord, and the N&B are in a small yellow box with a clear lid.

The No.6 box is also red & the lid label is about the same size as that of the No.4. It isn't clear whether it is a complete set or another add-on outfit. In another Ebay photo of the manual the printer is shown as IMPRIMERIE D'HONDT & DE GRAVE, Rue des Etangs-Noirs 83-85, Bruxelles-Ouest.

**A 3<sup>rd</sup> TYPE?** The evidence here is two batches of photocopied model leaflets, 'lots 1 & 2' I'll call them, both with the wording in French & Flemish. They show simple models made from a limited range of parts, and from outfits with a set structure unlike those for Types 1 & 2. The main types of part used are Strips, DAS, an A/B, a small Pulley, Axles, a Crank Handle, and an unusual 6h disc, apparently a Wheel Disc, which has the 2 smaller extra holes seen in the Type 2 Pulley Disc.

**The first lot** consists of 3 double sided sheets, about 21\*14cm deep, showing simple unnamed models for Sets 1-



6, & A. A note on several of the pages says that Belgian MERCATOR has government approval as a teaching aid (comme moyen matériel d'enseignement). The style of the name (below) on the front page has not been seen in the earlier material. Successive pages show slightly more complicated models and are headed: models made with 'Sets 1, or A'; 'Sets 1,2, or A'; 'Sets 1,2,3, or A'; ..... up to 'Sets 1,2,3,4,5,6 or A'. This would appear to mean that Set A was the largest set and was at least equivalent to Set 1 plus the add-on sets 2-6. None of the models have names or model numbers.

# MERCATOR

p1 shows 9 very simple models for Set 1 or Set A (Tongs to Swing). The main parts are 3-9h Strips, and 3 & 5h long DAS. p2 has 5 models (Aeroplane to Chair) for Sets 1, 2, or set A, and the new parts include 11h Strips, A/Bs, & 2x 6h Wheel Discs. The subsequent pages show 4, 3, 2, 3 models (Luggage Barrow to Man; Bed to Bridge; Monoplane & the Van shown at the bottom of the next column; Table to Crane, & the Saw Bench right) for Sets 3-6. The parts in them include respectively, 2 extra Wheel Discs & Axles; 15h Strips; 2 more Wheel Discs; and the Crank Handle & 2 Pulleys in the Saw Bench. This model also has a 5\*9h Plate, and similar black parts, but with 5\*5 & 5\*11h corner holes, are used in 2 of the No.3 models. There is no indication that these parts were not in the appropriate sets. The 5\*9h would need a slot in it for the Disc. None of the models are at all similar to the small ones in the Type 1 manual.

The second lot is 2 sides, about 16\*21cm deep, showing models N.4-6, Table to Chaise Royale, and N.10-12, Escarpolette to Trapèze (Swing to Seesaw). Though the MERCATOR name is not on either of these sheets, similar parts to those in the Set A models above are used (except the Plates, but none of the Lot 2 models need any), and 3 of the models are in the first lot, with identical illustrations. They include the Barrow right. Each model has a name, and afterwards 'Se construit à la boîte' (Made with set) followed by several numbers. Examples are 'n. 4, 41 (\*) 1, 3' and 'n. 9, 91 (\*) 3, 034, 036'. Other numbers included for the other models are 2, 5, 6, 8, 41, 81, 82. None of the numbers given for the 3 models common to those in the first lot match the set numbers in the 1-6 series needed to make them. I wondered if the Lot 2 numbers were the PNs of packs of different types of part, but for several of the models this was clearly not the case.

**MERCATOR History** Based on the general appearance of the lid labels and manual covers it will be assumed that Type 2 came after Type 1. Another pointer that may be consistent with this is the width of the Strips. It was about 13mm for both the 12.7 & the 13.0mm hole pitch parts. It would seem most likely that if the 12.7mm spacing had come first the Strips would have been 1/2" wide.

The only firm date known is from a magazine article in which it is said that after taking out a patent for flexible toy railway track in 1949 the firm that made MERCATOR went bankrupt a few months later. If that meant the end of Type 2 at that time the firm had been very busy since the end of the war in launching (or conceivably relaunching) the Type 1 range, and then altering virtually all the parts for the Type 2 sets. And why would that have been done? The Type 1 parts are perfectly good and so the only obvious motive would be to change to 1/2" pitch, for compatibility with MECCANO as it reappeared on the market, and/or to make it incompatible with the 13mm pitch TECNIC (the other major Belgian system after the war). I suppose that if this change was made the parts would have had to be fairly radically redesigned to avoid confusion between similar parts with

slightly different pitches (12.7 & 13.0mm).

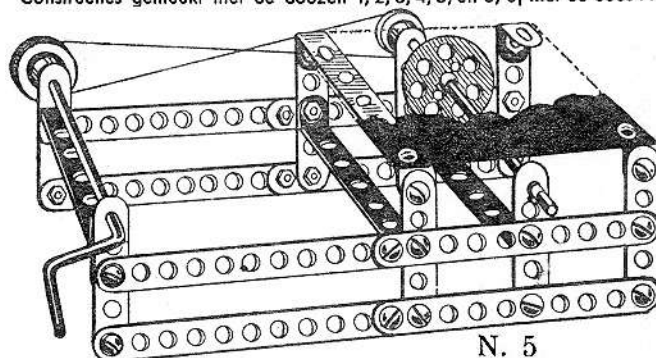
One can imagine a possible alternative. Type 1 ended when the original firm went bankrupt, and then the system was redesigned and relaunched by another company who had bought the MERCATOR name. The similarity of the unusual Type 2 lid label with KWIK BUILDER brings to mind the possibility that its (unknown) manufacturer may have been that company. But apart from the label the only real similarities between the two are the nickel A/B and Loose Pulley.

One other thing, no account has been taken so far of the 12.7mm hole pitch given in MCS for what seem to be Type 1 parts. On the grounds of simplicity one is tempted to hope that this was a mistake. But could those 6-figure PNs in MCS denote a new series of parts with 12.7mm pitch? Please measure your MERCATOR parts carefully.

No theories come to mind for the Type 3? sets, unless they were special outfits used in schools. The style of the name is quite different to those used in Types 1 & 2. The 2 small holes in the Wheel Disc are like those in the Type 2 Pulley Disc, and obviously the latter could be a press formed version of the former.

## MERCATOR

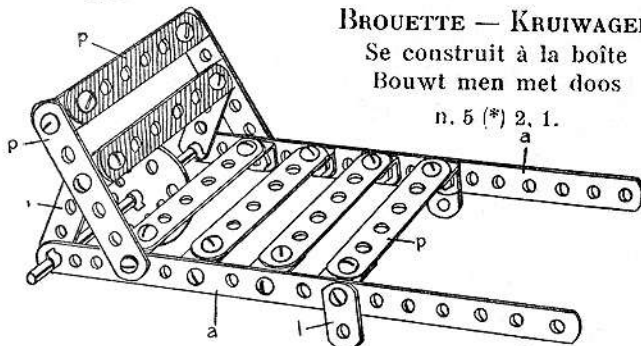
Modèles construits avec boîtes 1, 2, 3, 4, 5, et 6, ou avec boîte A  
Construities gemaakt met de doozen 1, 2, 3, 4, 5, en 6, of met de doos A



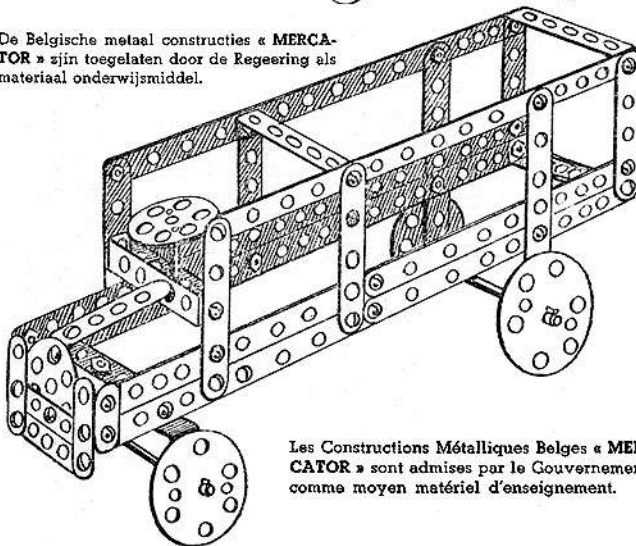
## BROUETTE — KRUIWAGEN

Se construit à la boîte  
Bouwt men met doos

n. 5 (\*) 2, 1.



De Belgische metaal constructies « MERCA-  
TOR » zijn toegelaten door de Regeering als  
materiaal onderwijsmiddel.



Les Constructions Métalliques Belges « MER-  
CATOR » sont admises par le Gouvernement  
comme moyen matériel d'enseignement.



**'New' System: BILD-R-JIG** This small American system is perhaps the simplest of the 'DIY' type yet seen. It consists of a Tool, Wooden Strips as structural members, a Saw to cut them to length, and lengths of thin Aluminium Strip to be cut and bent up to make brackets.

**The Box** measures 12¼\*6½\*2¾", and the top is shown below. The words bottom left are 'PAT. PEND.', but no patent



is known so far. The full depth sides of the lid include details of the maker in small letters, and the 2 models shown later. The N&B are in a cream card box, 1⅞\*5⅜\*½", with 'This box contains / BILD-R-RIG / BOLTS & NUTS' on the lid in red. The instructions or manual which would almost certainly have accompanied the Set, are missing.



**The Tool**, above, is made of substantial sheradised steel parts welded together, and its flanged base plate is 2⅞\*4⅞". It is fixed to the wooden base (10\*7⅜\*¾") by 2 wood screws. The detachable handle, 'A', for the hole punch, 8" long & ¼" Ø, passes through the hole in the top of the die, 'I', and then into the hole in the bracket 'E', the latter providing the fulcrum. In use a Strip is pushed forward under the bottom of the U-bracket 'H', against a stop which ensures the punched hole is central across the Strip. Inside the U-bracket a small split pin through the die spindle pushes down a return spring. The die makes clean holes in the wood and the aluminium Strips. The shearing blade, 'B', is used to cut the aluminium to length, and the metal Strip is located against a ⅞" long raised stop, 'C', during the operation. The wood is cut to length by a 6½" long, 18 tpi, Saw, 'D', with a 1½" red plastic handle moulded onto the end. (There may originally have been handles on the ends of the die handle & the shearing blade as well.) From the wear marks on the Tool, the method probably recommended was to hold the Strip back against the stop 'C' (as in the photo), pass the Saw blade between the bracket 'E' and the pin 'F', and then saw keeping the blade against the sides of

## Leading Particulars

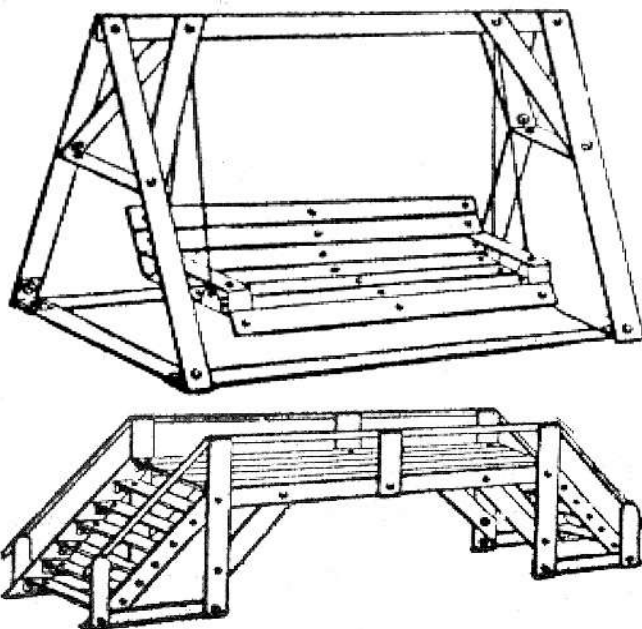
|                        |  |                   |              |
|------------------------|--|-------------------|--------------|
| <b>Name</b>            | BILD-R-JIG   | <b>Country</b>    | U.S.A.       |
| <b>Maker</b>           | M.H.Colvin Co., Buffalo 21, New York.  |                   |              |
| <b>History</b>         |  |                   |              |
| <b>Hole dia.</b>       | 3.9mm.   | <b>Hole pitch</b> | As required. |
| <b>Sets</b>            | One, unnumbered, known.  |                   |              |
| <b>Material/Finish</b> | Plain wooden Strips; plain aluminium Strips.   |                   |              |
| <b>Fixing</b>          | Bright steel 6-32 N&B. 6.4mm Ø RH Bolts, 8.0mm u/h. Machined hex Nuts, 7.6mm A/F, 2.7mm thick. |                   |              |
| <b>Remarks</b>         | No circular parts, Axles, Motor, or Gears.   |                   |              |

'E' & 'H'. Brackets could be made from the Aluminium Strip by bending around the pin 'F'.

The **Wood Strip** is ¾\*⅞" in section, quite soft, and was probably supplied in 12" lengths - the pieces found in the box are the equivalent of 20 such lengths. The **Aluminium Strip** is ¾\* .020", also quite soft, and the combined lengths of all the pieces found is about 30".

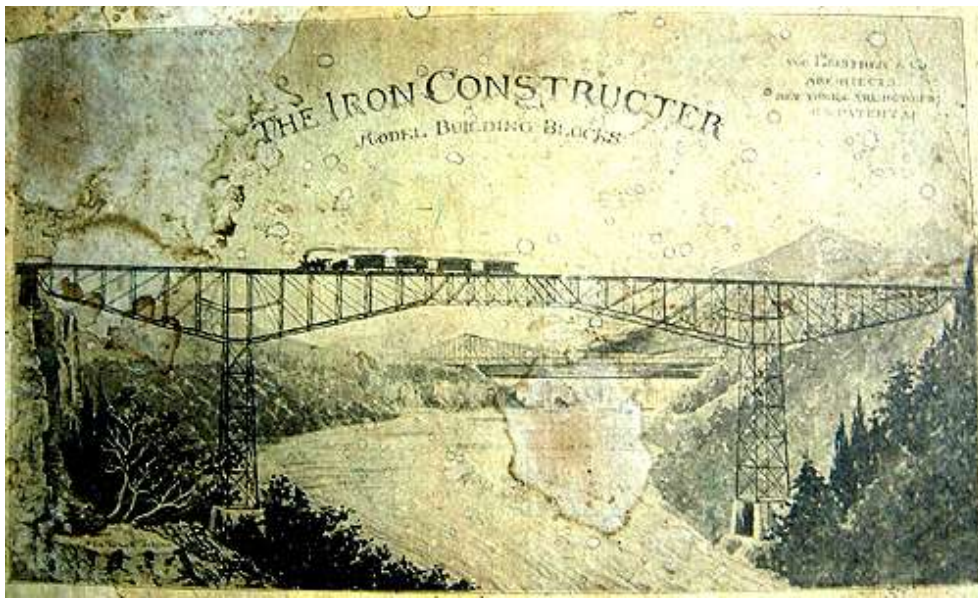
47 **Bolts** were in the Set, and 47 **Nuts**. However although all the Nuts are the same size externally, a handful were tapped with a smaller thread than the 6-32 of the Bolts & the other Nuts, perhaps 5-44. The **Span'driver**, 'G', is 2" long and is made of ⅛" nicked steel.

**Models.** The Bridge on the top of the lid, and the 2 models below, from its side (converted to B&W), are probably typical. It isn't clear what the handrails of the Bridge are made from - it would not be practical to reduce the width of either type of Strip with the tools provided.



Thank you to David Hobson for lending me his Set for this account.





**'New' System: THE IRON CONSTRUCTOR** Jacques Pitrat found a set of this early American system recently and kindly sent full particulars. It was patented in 1895 and might well have been included in the early bridge patents discussed in 10/261, but really it is in a class of its own with the potential to construct a wide range of braced structures, model & full-size, using a limited number of types of part.

**The PATENT** Only a British patent is known, No.14442 of 1895 (details courtesy David Hobson), and it was granted to 'Edward von Leistner, Architect, residing in New York, No. 312 East 14<sup>th</sup> Street, and Hermann Goetter, Ph.D., Gentleman, residing in Arlington, N.J.' Their invention related 'to building sets for actual constructions as well as for models for technical construction bureaus and schools, and the improved set of building members further constitutes an instructive and educational toy.' The parts were to be of metal and are shown in Figs.1-12 on the facing page: *a* & *b* in Figs.1 & 2 are angle girders; *c* in Figs.3 & 4 are channel sections and the wider flange *t* serves to carry floor or ceiling pieces; *d* in Figs.5 & 6 are tie rods; *e* in Fig.7 is a transverse member with threaded ends used to join parallel frameworks together; *f* in Fig.8 is 'a diagonal binding piece with angular ends'; and *g* to *p* (Figs.9-12) are the threaded fixings used to join the other parts.

The different lengths *b* to *d*3, and the positions of the holes, are related geometrically, and hence mathematically, to the basic length *a*, and *a* can of course be any length depending on the application. The actual relationships are too lengthy to be given in full here but for example *b* is the diagonal of a square with sides *a*; *c* is twice *a*; and *d*2 is the diagonal of a rectangle with sides *a* & *c*. After that the complexity increases considerably but is shown in a geometrical diagram in the patent. *e* (in Fig.7) is to be 'equal in length to *b*, less the thickness of the material in the ends of *d* or *f*'.

Only one example of a structure is given in the patent, the part trusses for a large roof span shown in Fig.14. *x* are wooden pieces to support the material with which the roof is covered. Other applications suggested are bridges, the frameworks for tents, & temporary buildings; it was thought that the military would find the system valuable. As far as is known no one actually made use of the patent for full-size structures, but then, until the present set turned up the existence of a constructional set based on the patent was

not generally known. For real structures it would of course be the concept that would apply to different projects - the actual set of parts needed would depend on the basic length '*a*', & would be unique to a particular project. Another question is the efficiency of the resulting structures - the roof in the patent does look rather complicated compared with the metal truss systems used today but perhaps the use of numerous lighter members would be more convenient in some situations. There is talk in the patent of carrying the parts around on mules. Use as a toy or instructional aid is a different matter & it would be interest-

ing to see the models in the (missing) manual for the Set.

Jacques described the system, fairly I think, as very, very clever, with almost endless possibilities thanks to the versatility of the parts. And he also noted that it can be regarded as the very first 'industrial' system. One or two of its features can be seen in earlier patents, the method of joining frames using cross bars with threaded ends for instance is in the Weiss 1892 patent. But such items are only peripheral to the main concept. It must be said though that finding some of the different dimensions is not for the faint-hearted.

**The SET** It was found in America, it is probably not complete, and there was no manual with it. The parts are in a cardboard box, 13.8\*17.5\* 3cm and the label, which nearly covers the lid, is shown above left. Below the open box.



Another bridge can be seen on the label in the background (under the centre span of the one in the foreground) but whether either are meant to be made from the system seems doubtful. Under the name is 'Model Building Blocks', an odd choice of sub-title but perhaps it was meant to bring to mind the no doubt by then well-known Richter Block Sets. They would possibly have included the 1895 Bridge Building Set with the Slotted Strips (see 25/730), an example of which has now also been found in America. In the top right corner is 'von Leistner & Co., Architects, New York & Arlington. U S Patent AF' Perhaps the 'AF' stands for Applied For. The picture on the label is signed v. Leistner.

**The PARTS** Wooden Plates, 13.8\*8\*.5cm, with comb-



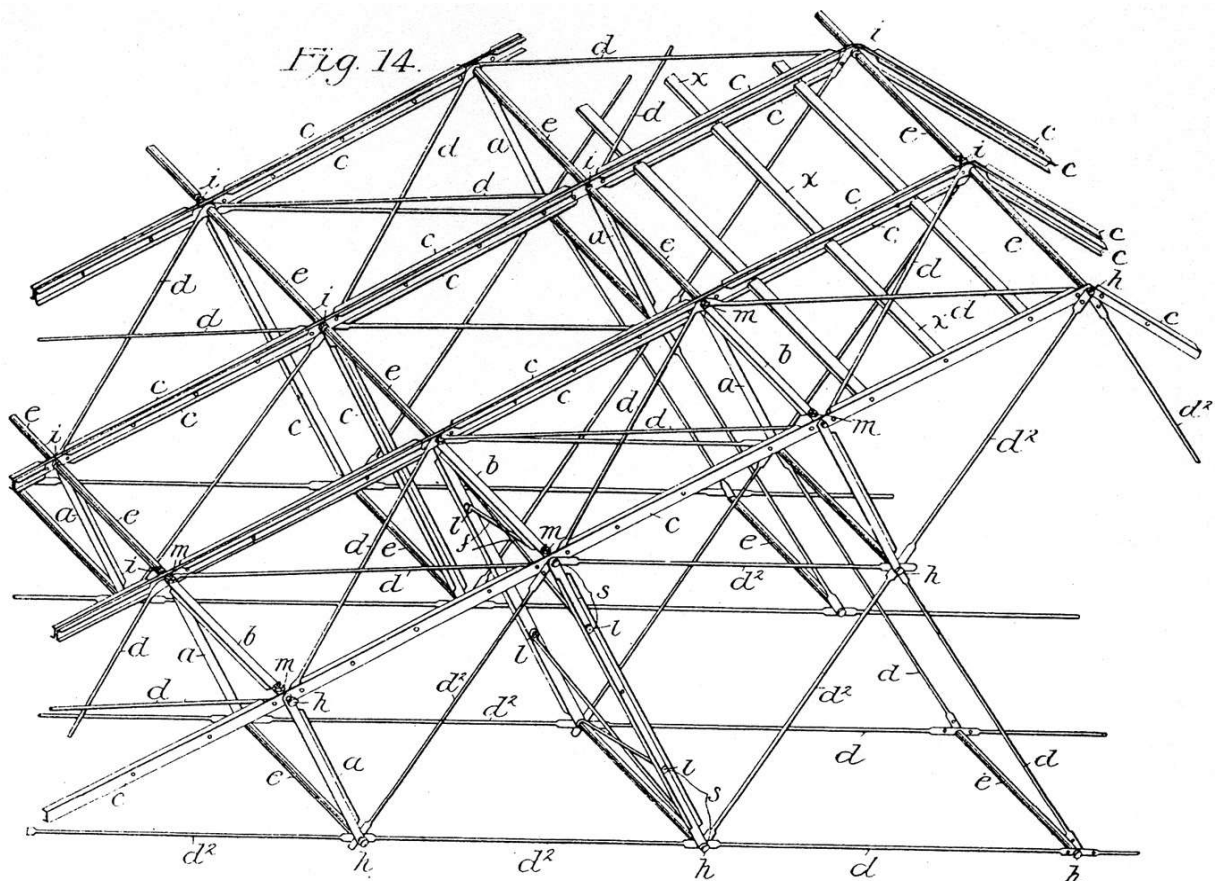
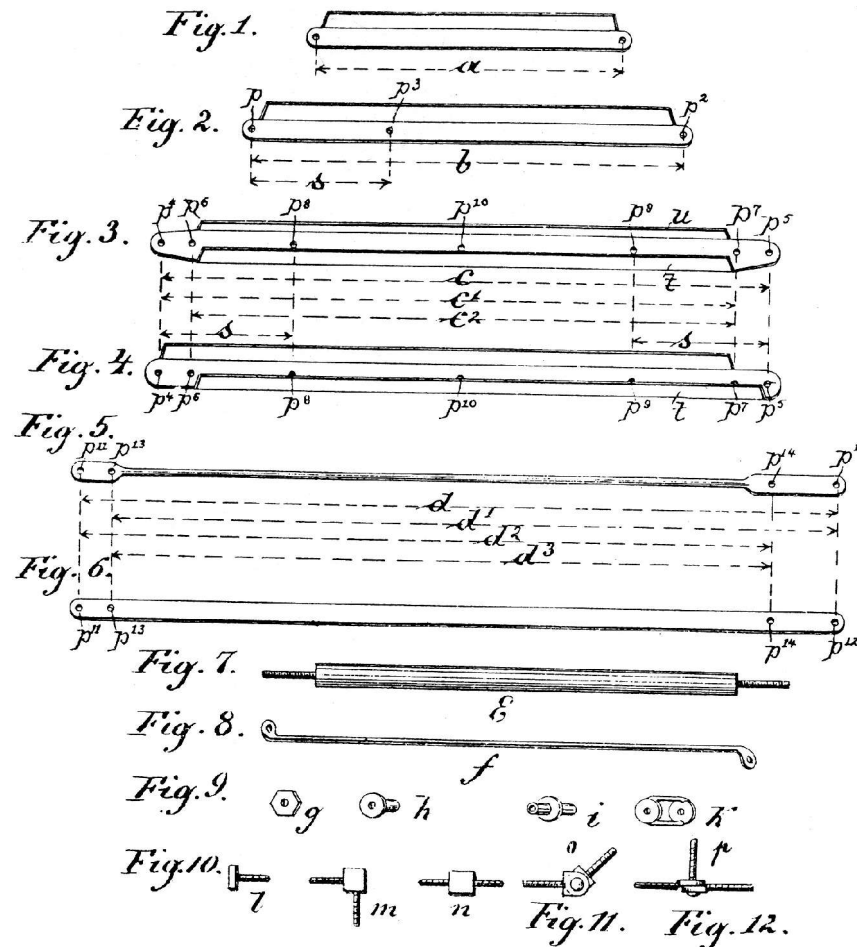
jointed ends can be seen in the box and could form the decking of a Bridge. All the other parts are made of brass. Given those materials, the 'IRON' name seems rather inappropriate, but probably stems from iron being the

suggested material in the patent for the full-size components.

The structural elements are as shown in Figs.1-3, 5 & 7 of the Patent (parts a-e) except that there is an extra hole in a at distance s from an end hole (as in b). The holes are 1.8mm Ø and the distance between the centres of the outer holes in a is 65mm. The overall lengths of parts a, b, & c are 7, 9.5 & 13.8cm. The Wooden Plate fits into the channel of c and both parts are the same length overall. Part d is 16.4cm long. e is 10.7cm o/a with the centre 8.5cm long, and about 3mm in diameter. Both d & e are longer than they would be if the rules in the patent were followed, but a rough calculation showed that the new length of d would probably compensate for the increase in e.

The threaded parts found in the Set are h & i in Fig.9 and l in Fig.10, but there were almost certainly others originally. The Extended Nut, h, is 5mm long and the Screw Coupling, l, 9mm; both are 4mm Ø and have a 7mm Ø flange with a serrated edge for tightening. Both are well made but the Bolt, i, is very crude. The head is flat, 2.5\*5mm, to allow finger grip, and the shank, 1.5mm Ø & 6.5mm long, appears to have been twisted to some degree about its axis after having had a thread impressed along into its top & bottom faces, with nothing on the sides. The net result is a rough and ready bolt with a non-continuous thread.

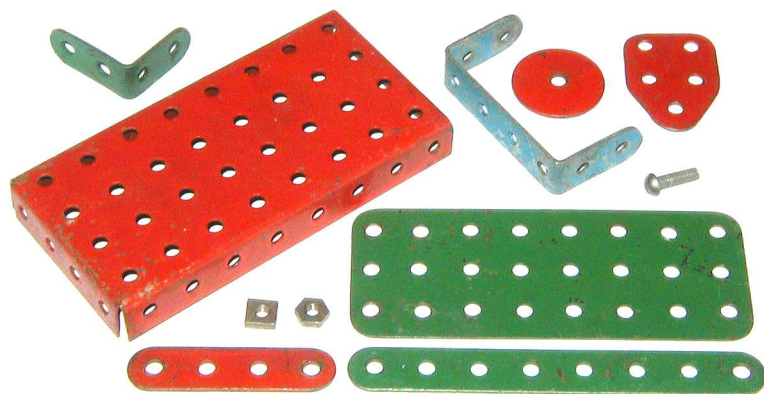
Jacques remarked that, at least with the parts remaining in the Set, it isn't easy to see how a Bridge, for instance, could be made.



**'New' System: ARWILL CON SET** That's the name on the front of the manual for this small UK system. Its parts were largely described as Mystery Parts No.34 in 17/475 & 18/507, but it is now possible to put a name to them. And that is thanks to Mike Rhoades, who very kindly donated the manual and the parts that were with it.

Below a photo of the different **parts** in the lot. Compared those in OSN 17 the green is the same lightish colour, but the red is not as dark, a light to medium shade. The manual gives the **contents of Set No.1**, and they are listed below, with some notes where the parts differ from the earlier descriptions. Except in the A/B, all holes are 3.9mm.

- 1 Box-Plate (**4\*8h Flanged Plate**).
- 2 Side-Plates (**3\*8h Perforated Plate**). At .035" the part is the same thickness as the Flanged Plate, and is appreciably thinner than before.
- 4x Gusset-Plates (**Flat Trunnion**). The holes are the standard 3.9mm, not the 4.1mm of the OSN 18 parts.
- 2x **Strips 12 hole**. None were in this lot.
- 4x **Strips 8 hole**.
- 8x **Strips 4 hole**. All are red, not green as before.
- 4x **Wheels (Discs)**.
- 4x Angles 4 hole (**2\*2h A/B**). The part appears to be made from a (green) 4h Strip but the holes are 4.3mm Ø. The centre of the bend about 2mm from the mid point between the centre pair of holes.
- 2x Bends 8h (**2\*4\*2h DAS**). Made from the 8h Strip with the bend point again offset to give longer lugs. Unlike the OSN 18 example it is a light to medium blue, a colour not seen on any other parts.
- 1x **Screwdriver**. Missing.
- 1x **Spanner**. Green, 43mm long & 19mm wide o/a.
- 24x **Nuts & Bolts**. 4 BA steel, details in Summary Panel.



**ARWILL  
CON  
SET**

The **manual** has 6 pages including covers, 125\*187mm deep – it is one folded sheet with a leaf stapled inside. The cover is plain with just the name left across it, and rows of dots above and below parallel to the lettering. The 8 models start with SEE-SAW on p2 and end with SWING on p6. They include a couple of Barrows and none are 'mechanical'. Right, natural size, the only one with 4 Wheels, and above it the only 'modern' model.

There is a halftone of each model - reasonably large but none too clear. No other instructions are given but there is a note saying 'Additional parts have been used to enable you to see the large variety of models that you can build by keeping in touch with your local agent or toy shop and adding to your set weekly.' (So it really was a 'Con' Set.)

**History** No details of the maker are given in the manual, or any indication of date. But the price is given as

## Leading Particulars

**Name** ARWILL CON SET

**Country** U.K. (very probably).

**Maker**

**History** Very likely soon after WW2.

**Hole dia.** 3.9mm, with a few up to 4.3mm.

**Hole pitch** 12.7mm.

**Sets** Probably only No.1.

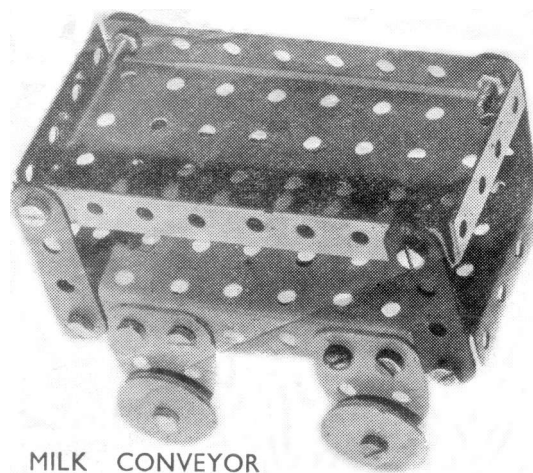
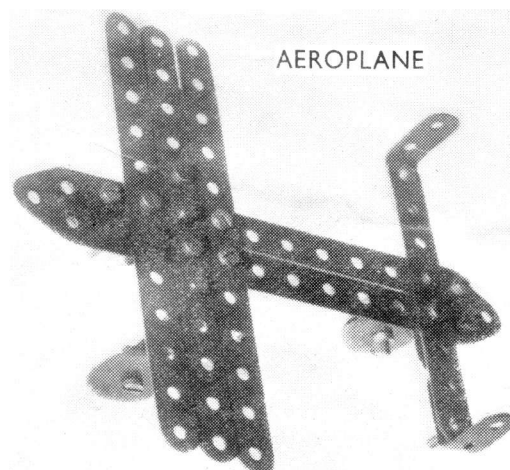
**Material/Finish** Painted steel. All parts green, except the red Flanged Plate, Disc, & some 4h Strips, and the blue DAS (green also known).

**Fixing** Plain steel 4 BA N&B. Bolts: 6.1mm Ø RH, ½" u/h. Nuts: pressed, square or hex, both 8.0mm A/F & 2.3mm thick.

**No** Axles, Bosses, Motors or Gears.

**Remarks** Known from parts with a manual.

12s 2d including purchase tax, and the latter dates it to after WW2. It was most likely one of the many short-lived outfits from soon after the war - soon after because the relatively high price of 12/2 would not have been viable once the scarcity of toys in the immediate postwar years abated. In 1947 a No.1 MECCANO cost 10/6 including tax, and it was of course far superior to the present Set. There is nothing in the manual to indicate that there were any sets other than the No.1. ARWILL seems to be more common as a Nordic rather than a British name, or could it be that the maker was Arthur Williams, or some such?

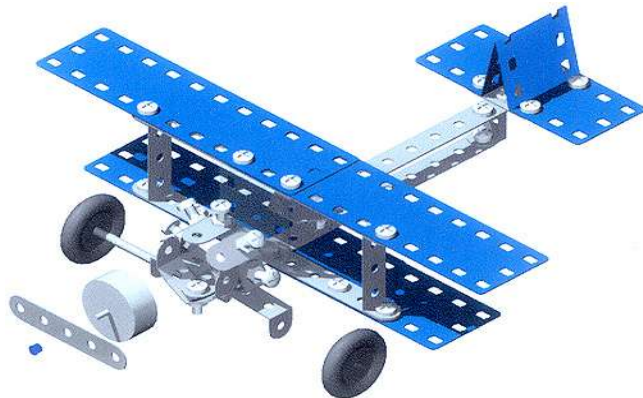




**BRAL Bounces Back** As promised on the old Bral web site (see 26/778) BRAL has returned, and a series of 7 small sets packed in canisters can be seen on a new web site, [www.bral.biz](http://www.bral.biz). Jim Osborne saw some on sale when he was in France last June, and alerted me to them. The sets can be bought from the web site at prices ranging from €16-32. Also step-by-step instructions can be downloaded for all the models, and for a few more which aren't on sale.

**The Sets** are:

- #10011 'double 1.1 scooter – gru'. 110 parts to make either (I suppose, or should it be 'and') a Scooter or a Crane.
- #10012 'double 1.2 camion – rescue'. 130 parts for a Breakdown Truck or Elevated Platform Vehicle. The canister is shown left.
- #10021 'motor 2.1 elicottero'. 120 parts & Electric Motor for a Helicopter.
- #10022 'motor 2.2 mulino'. 120 parts & Electric Motor for a Windmill.
- #10031 'solar 3.1 aereo'. 110 parts, Solar Cell, & Motor for the Biplane below. The Motor seems to just push into the



front of the model. The Solar Cell is connected to the Motor by wires, & is not built into the model. As shown it is a little bigger than the tailplane. Not as neat as the CONSTRUCTION model mentioned in 16/442, with the Cell as part of the wing.

- #10032 'solar 3.2 giostra'. 120 parts, Solar Cell, & Motor for a Chair-O-Planes roundabout. The Motor output shaft drives the centre spindle directly.

• #10041 '4.1 light spazzaneve'. 170 parts for the Snow Plough right. It looks a more interesting model but the instructions for it wouldn't download. I wonder what 'light' in the title signifies.



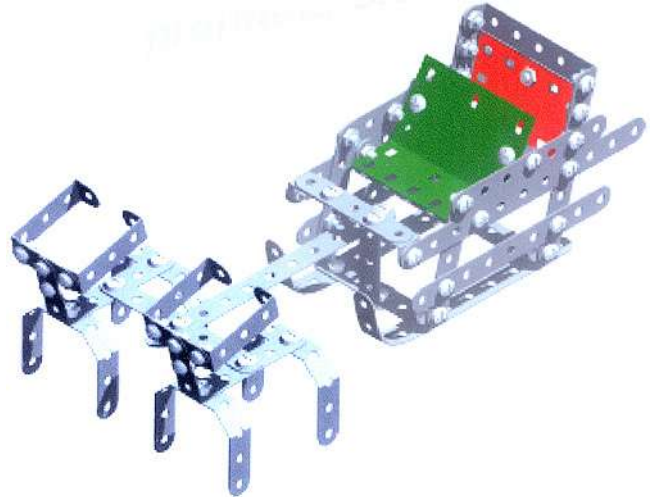
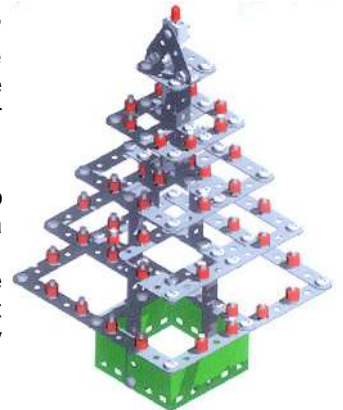
**Packaging** The canisters vary in height from set to set, and their colour for the different types of set varies too.

The side panels & lids are green for the 'double' & 'light' sets, blue for the 'motor' sets, & yellow for the 'solar' outfits.

**The models** for which only the instructions are offered are:

- 'Albero di Natale & Slitta' from 'double 1.3'. That is the Xmas Tree right, and the Sleigh pulled by two reindeer below. Rather nice models; for the Xmas trade perhaps.
- 'Go Kart & elicottero', two simple models, each from a 'Bral Box'.

All the models are shown made from bright Strips, and Plates variously blue, green, yellow, & red.



BRAL: S1

OSN 29/857

**Snippet: New System – LE PETIT CONSTRUCTEUR**

All that is known of this system is the photo right of what seems to be the box lid. The words top left are 'KIT DE MONTAGE COMPLET'. Comparing the model with the BRAL Biplane above shows the parts' parentage very clearly – notice for instance the slotted holes in the Flexible Plates, and the way the fin is made by folding a 7h long Plate sharply across its centre holes, with bends at each end to provide mounting flanges.

So perhaps LE PETIT CONSTRUCTEUR was (or is) made by Bral for the French market, or perhaps a French company used BRAL parts. The Set appeared on Ebay in December 2002, so before OSN 26 in April 2002 when according to their web site, Bral was not marketing sets. Does anyone know of any other outfits with the LE PETIT CONSTRUCTEUR name?



LE PETIT CONSTRUCTEUR: S1

OSN 29/857

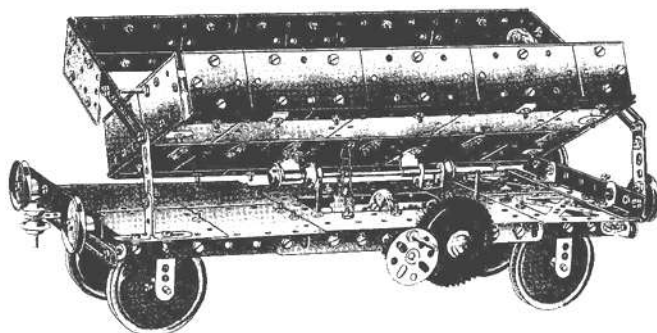
**DUX-UNIVERSAL Sets 71 & 72** After the brief notes on these in 27/783 Jacques Pirat wrote that he has a manual for them, & most of the parts. He kindly sent some details & copies from the manual. The page below shows the parts & the set contents. The latter are in many ways similar in both sets but Nr.71 has Gears & various parts to provide bearings for them, while Nr.72 has Sprockets & a Universal.

The general appearance of the parts, & their colours are as described in OSN 27 (the illustrations in colour are on the OSN web site). The 19 parts which are not in the basic sets, and are not therefore shown in MCS, are as follows:

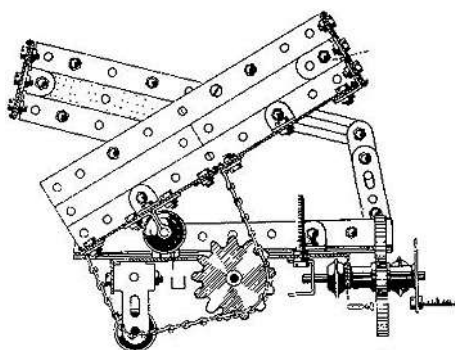
- The **Flanged Plate** 1009, 150\*90mm with a centre cutout 80\*35mm. The pitch of the end holes is 10mm as in the Beams (see #1015a & 20/558) – all the others are the standard 15mm.
- The **Triangular Plate** 1011 is 58mm wide & 35 mm deep.
- The **Reversed A/B** 1021a doesn't seem in any way related to the standard part #1021, a flat 'T' Bracket.
- The **Bearing Brackets** 1022a & b. The centre of the base of the latter is raised so there is no need for a hole in the part to which it is bolted. Another **Bearing Bracket** 1035.
- The 10t **Pinion** 1031. The **Rack** 1067, 90mm long, with a 75mm long flange for mounting.
- The **Gear Plate** 1051a is like the standard part 1051 but with additional holes that allow any DUX Gear or Pinion to mesh with any other, except a pair of the 45t Gears 1032b.
- The **Small Gear Plate** 1051b allows the brass **Worm** 1064 to mesh with any Gear or Pinion - a pair are bolted at right angles to a pair of 1051a, all on the same Plate.
- The **Corner Plate** 1053a – its sides are 32 & 34mm long.
- **Plates** 1057, 1058, are the same size as the standard Plates 1001, 1005 but with more holes, and are 1.2mm thick instead of .5mm.
- The **Hook** 1059a. There seems not to be a Hook among the standard parts; 1059 is a Grab.
- The **Sprocket Wheels** 1068a & b, 31 & 55mm o.d., with 13 & 26 teeth. And the (nickeled) **Chain** for them, 1069.

- The **Universal** 1070, and the **Spanner** 1073b.

The **MANUAL** has 24 pages, about 24\*16cm, plus covers. On the front is 'Dux Universal / Vorlagenbuch / Getriebe+ baukasten Nr.71 und Nr.72', and a picture of 4 meshing Gears (3 of which are in the standard set 104 but not in Nr.71.) The PR is T 851 L, but whether that indicates 1951 isn't known. 6 models are shown for each Set (71 & 72) combined with one of the standard sets - 3 with Nr.101, 2



with Nr.102, & 1 with Nr.103. The Tipping Wagon above is made from Sets 72 & 103, & the mechanism can be seen right. A Pinion on the handwheel shaft turns the large side Gear Wheel, and its shaft (not in the view) carries a second Pinion which meshes with a Contrate on the Sprocket shaft (the top of the Contrate can



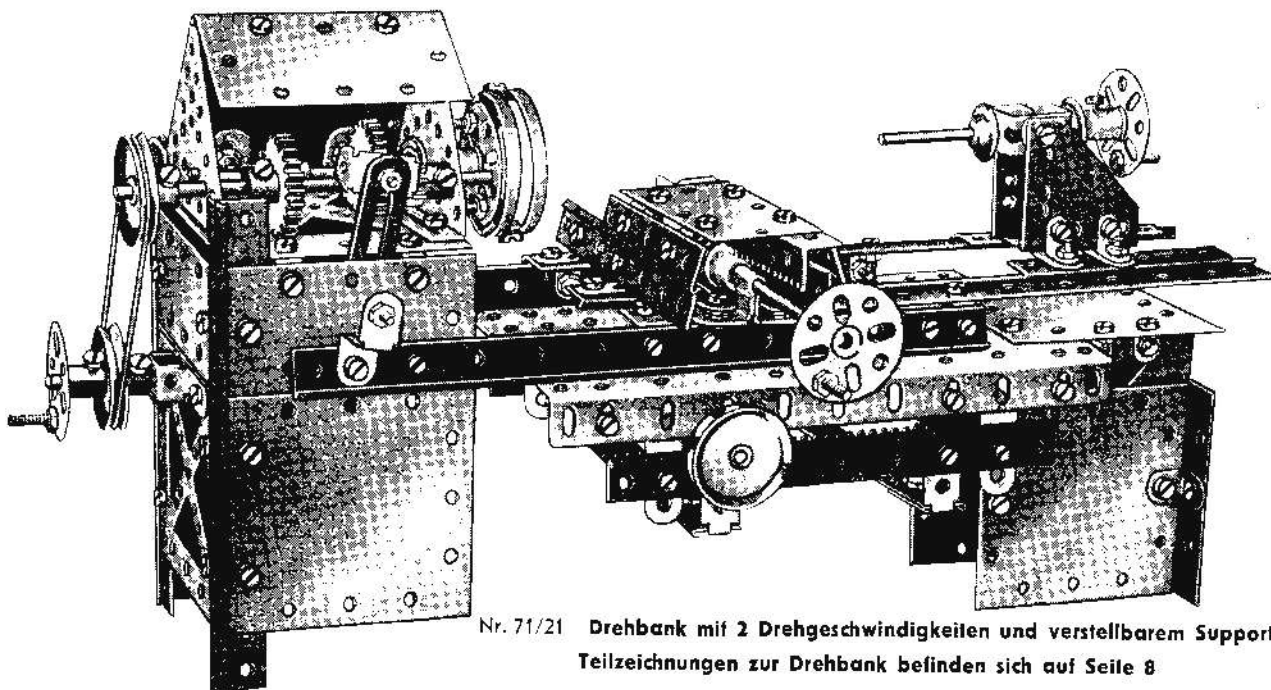
| Inhalt der DUX-Getriebebaukästen Nr. 71 und Nr. 72 |                           |        |        |          |  |        |        |          |                                   |        |        |
|--|---------------------------|--------|--------|----------|--|--------|--------|----------|-----------------------------------|--------|--------|
| Teil Nr.   | Bezeichnung               | Nr. 71 | Nr. 72 | Teil Nr. | Bezeichnung                                    | Nr. 71 | Nr. 72 | Teil Nr. | Bezeichnung                       | Nr. 71 | Nr. 72 |
| 1005   | Rechteckplatte 60 X 30 mm | —      | 2      | 1041     | platte Welle 30                                | 1      | 1      | 1061     | Stellring                         | 4      | 4      |
| 1009   | Grundplatte 150 X 90 mm   | 1      | 1      | 1042     | platte Welle 70                                | 2      | 2      | 1064     | Schnecke mit Madenschraube        | 1      | —      |
| 1011   | Dreieckplatte mit Lappen  | 1      | 1      | 1043     | platte Welle 90                                | 1      | 1      | 1067     | Zahnstange                        | 2      | —      |
| 1015a  | Tragschiene 90 mm         | 4      | 4      | 1044     | platte Welle 110                               | —      | 2      | 1068a    | Kettenrad 13 Zähne                | —      | 2      |
| 1021a  | Z-Winkel                  | 2      | 2      | 1051     | Lagerplatte für Stirnrad                       | —      | 2      | 1068b    | Kettenrad 26 Zähne                | —      | 1      |
| 1022a  | Längslager                | 2      | 2      | 1051a    | Lagerplatte groß, für Kegelräder und Schnecke  | 2      | —      | 1069     | Kette 100 cm                      | —      | 1      |
| 1022b  | Stützlager                | 1      | 1      | 1051b    | Lagerplatte klein, für Kegelräder und Schnecke | 2      | —      | 1070     | Kardangelenk                      | —      | 1      |
| 1023a  | Laufrad 27 mm mit Nabe    | 1      | 1      | 1053a    | Knotenblech groß                               | 2      | 2      | 1071     | Schraube 23 mm                    | 4      | 4      |
| 1025   | Lochscheibenrad           | 1      | —      | 1057     | Fußplatte 60 X 60 mm                           | 1      | 1      | 1072     | Schraubenschlüssel gekröpft       | 1      | 1      |
| 1026a  | Winkel                    | 5      | 5      | 1058     | Fußplatte 60 X 30 mm                           | 2      | 2      | 1073b    | Schraube 5 mm                     | 15     | 15     |
| 1031   | Stirnrad 10 Zähne         | 2      | —      | 1059a    | Kranhaken                                      | 1      | 1      | 1074a    | Schraube 12 mm                    | 6      | 6      |
| 1031b  | Stirnrad 22 Zähne         | 2      | —      |          |  |        |        | 1171/1   | Vorlagenbuch für Nr. 71 u. Nr. 72 | 1      | 1      |
| 1035   | Lagergabel                | 2      | 2      |          |  |        |        |          |                                   |        |        |



just be seen to the right of the Sprocket in the general view). The end linkages cause the side of the Wagon's body to lift as it tilts.

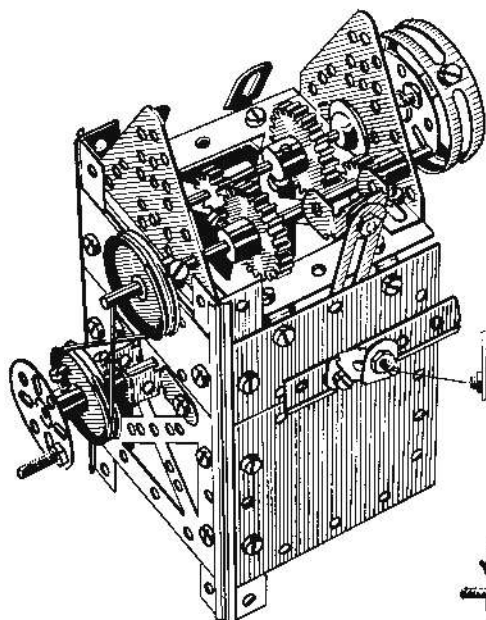
The Lathe below is made with Sets 71 & 102. It includes

two geared movements for the tool rest but the tailstock seems to be fixed. The Bearing Brackets 1022a & 1035 are used in the tool rest mechanism.



Wird der als Schalthebel verwendete Z-Winkel, siehe auch Abbildung 71/21b auf Seite 8, nach rechts gelegt, so greifen die Zahnräder auf der linken Seite ineinander und die Drehscheibe der Drehbank dreht sich schnell. Wird der Schalthebel nach links gelegt, so greifen die rechts liegenden Zahnräder ineinander und die Drehscheibe dreht sich langsam.

| Teile zur Modell 71/21 |           |            |           |            |  |
|------------------------|-----------|------------|-----------|------------|--|
| 6 — 1001               | 1 — 1017b | 3 — 1023   | 2 — 1035  | 2 — 1067   | Die erste Zahl in den Tabellen bedeutet die Stückzahl und die zweite die Nummer der bei dem betreffenden Modell verbrauchten Bauteile. |
| 4 — 1004               | 3 — 1018  | 4 — 1025   | 1 — 1036  | 2 — 1071   |  |
| 7 — 1005               | 2 — 1019  | 4 — 1027a  | 3 — 1037  | 150 — 1072 |  |
| 1 — 1009               | 6 — 1020  | 38 — 1028a | 2 — 1042  | 121 — 1074 |  |
| 4 — 1014b              | 4 — 1021  | 2 — 1031   | 2 — 1051a | 9 — 1074a  |  |
| 6 — 1015               | 1 — 1021a | 1 — 1031a  | 2 — 1053a |            |  |
| 4 — 1015a              | 2 — 1022  | 2 — 1031b  | 6 — 1061  |            |  |
| 6 — 1016               | 2 — 1022a | 2 — 1034   | 1 — 1064  |            |  |



71/21b Schaltgetriebe der Drehbank

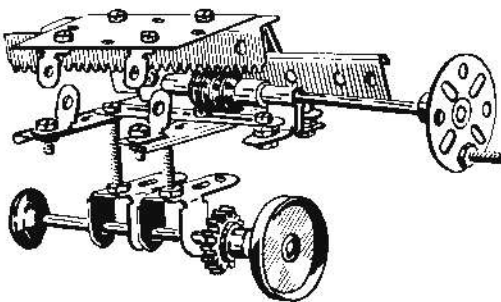


Abb. 71/21c Support

Das kleine Zahnrad Nr. 1031a greift in die im Drehbankbett eingebaute Zahnstange.

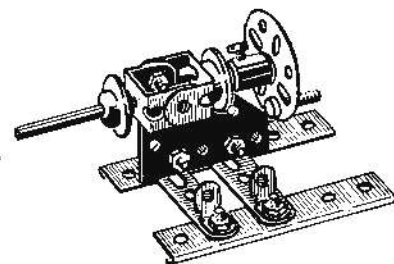


Abb. 71/21d Reifstock der Drehbank

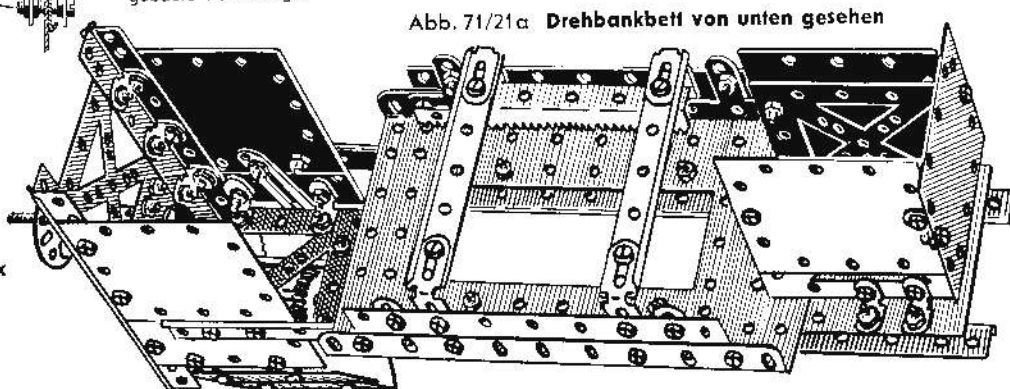


Abb. 71/21a Drehbankbett von unten gesehen

**Notes on VAŠEK** The Illustrated Parts & Set Contents of this Czech system are in MCS, but the key dimensions of the parts aren't given and it is hard to identify some of them. Many of the pieces resemble MÄRKLIN but the hole pitch is 13.0mm, and the Flat Plates & some other parts are made of fibre, like the original MECCANO Flexible Plates.

This account is based on a 1959 No.6 set to hand; photos of, & notes about, a No.8 kindly sent by Werner Sticht; and Ebay photos of 2 other No.8's. The first two sets are both missing a few parts, but the Ebay sets are probably fairly complete. Also used are some manuals, including a No.4, a No.6, &, courtesy David Hobson, a No.8. Especial thanks are due to Werner for translating the text in the manuals. In passing, set numbers are in Arabic numerals on the lid labels & manual covers, but Roman inside the manuals.

**Dates** The No.4 manual cover has a PR of ST 202-5167-63, the No.6 (it was with the 1959 No.6 set) has PMT 02-2222-55, & the No.8 has Pmt 02-227-54. No firm dates are known for VAŠEK but MCS gives the end date as the late 1960s and one suspects that it began after WW2. If the last PR numbers indicate dates they fit into this time span.

**VAŠEK's manufacturer** is given on the back of the '54' & '55' folder as the IGRA People's Cooperative, and on the '63' folder as the KOVODRUŽSTVO People's Cooperative. In both cases it is said to be made in Prague. The packing slip with the 1959 No.6 set has IGRA on it.

The origin of the **VAŠEK name** isn't known. Vašek is a Czech surname and is also a diminutive of the forename Václav. Perhaps the system existed before the days of People's Coops and Vašek was the name of the company that made it then.

**The PARTS** The picture of the parts in the manuals is shown on the facing page. The parts in Werner's set, and probably in the other No.8's, are all steel, whereas most of those in the No.6 are aluminium.

The **colours** of the parts differ too in many cases. In the notes that follow the parts in the No.6 are asterisked, and, for the metal ones, colours, and material if it is not aluminium, are given in square brackets. The main colours of the metal parts in the No.8's are green for Strips, A/Gs, & the Brackets in some sets; and red for Plates, most of the large circular parts, & the smaller ones in some sets. Exceptions are given in curly brackets, except that the colours of the DAS & Brackets are only given in the general Colour Scheme for each of the No.8 sets, in the 'SETS' section. In the photos it is sometimes hard to be sure of the colours of unpainted parts and they will be noted as bright (perhaps nickel), silver (a matt look which in some cases might be aluminium), or brassy (a somewhat metallic looking pale to mid brown colour).

**Dimensions** are from the No.6 parts or, failing those, the literature.

**Basics** Unless stated otherwise: holes are 4.1mm at 13.0mm pitch; Strip parts are 12.0-12.3mm wide & have fully rounded ends (but the metal outside the end holes can be up to 5mm); slotted holes are 7.8-8.1mm long.

**Bosses** are nicked steel, 4.1mm bore, and 10mm long, double-tapped, with a narrow ring of peening. The o.d. is 10.0mm but some, noted below, are 8.0mm.

**Threads**, all are M4.

**#1-7 Strips** have 25\*,21,19,17,15,13,11\*,9,8,10,7\*,6\*,5\*,4\*,3\* holes. The ends of the 25h are semi-radiused and the hole spacing over the whole length is about 1½mm short. [The 25 to 6h are steel painted in various shades of dark green. The 4 & 5h are a lightish green, & the 3h is unpainted.] [In one set the Strips with 7h and less look bright, perhaps nicked.]

**#8-9d A/Gs**, 25\*,21,19,17,15,13,11\*,9,7,5h long. 18\*14mm in section, with square corners. [Lightish blue]

## Leading Particulars of VAŠEK

**Country** Czechoslovakia

**Maker** The IGRA, & then, probably around 1960, the KOVODRUŽSTVO People's Cooperative, both in Prague.

**History** Perhaps post-WW2 to the late 1960s.

**Hole dia.** 4.1mm.

**Hole pitch** 13.0mm.

**Sets** Nos.1 to 8 (also called I to VIII).

**Material/Finish** Steel or aluminium, mostly painted, with green Strips & A/Gs, red metal Plates, & brownish fibre Plates. Circular parts are red, blue, & green. Other colours are known including blue A/Gs.

**Bosses** Steel, 8.0 & 10.0mm Ø, d/t M4. Bore 4.1mm.

**Fixing** Plain steel M4 N&B. Hex Nuts 7.0mm A/F. RH Bolts, 7.0mm Ø (longer ones have 7.0 mm CH).

**Axles** 3.95mm Ø.

**Motors** At least one electric motor is used in the manual models but make not confirmed.

**DP** 11.5 (Mod. 2.2).

**Remarks** The Israeli TEKNO has many similar parts.

**#10\* & #11\* Strips** are 7 & 5h long with slotted end holes. [Lightish green.]

**Brackets #12\* A/B**, made from the **Flat Bracket #14\*** (with a round & a slotted hole, and about 4½mm of metal outside each). **D/B #13\***, 14.8mm wide. [Unpainted.]

**#15/34-36b Tyres/Rubber Rings** to fit 50,25\*,18,40mm Pulleys. [The 25mm is a fat white Rubber Ring.] {The 25, 40, & 50mm are black rubber Tyres. Some, perhaps all, have PNEU MATADOR CORD on one sidewall & VASEK diametrically opposite.}

**#16 Bracket**, as illustrated.

**#17 Curved Strip**. It has slotted end holes. {Red or bright.}

**#18-19a DAS**, 7\*,9,3,5\*h long, 1h deep. [Steel painted brown.]

**Brackets #20\*,20a,20b,20c** – as illustrated. [Steel painted brown.]

**#21\* Rev. A/B** has 3 round holes. [Unpainted.] A **1\*2\*1h Rev A/B** can be seen in one of the No.8 sets.

**#22\* Double Bent Strip** has slotted outer holes.

**#22a\* D/B 2h Deep**. [Unpainted]

**#22b\* Collar**, nicked steel, 10.0mm Ø, 12.0mm long.

**#22c\* 3\*3h Flat Bracket**, with all round holes. [Beige.]

**#22d\* 3\*5h T-Bracket**. Parts made from it are **#22g\*** with the 2h long sides of the 5h cross arm bent up at 90° to the 3h arm; **#22h** with the tips of the 5h arm turned up; **#22i** with one side arm formed into a 1\*1\*1h 'U' by two 90° bends; **#22j**, a mirror image of #22i; & **#22k** with the 5h arm formed into a Double Bent Strip shape. [Unpainted.]

**#22e & #22f, 2 & 3h High Double Bent Strips**, probably with round holes in their base lugs.

**#23\* DAS 2\*5\*2h**. It is shown as 7h long, which may be **#23a**, but a **2\*3\*2h DAS** can also be seen in one No.8. [Steel painted brown.]

**#24\* Hook**, flat, 31mm long o/a. [Unpainted.]

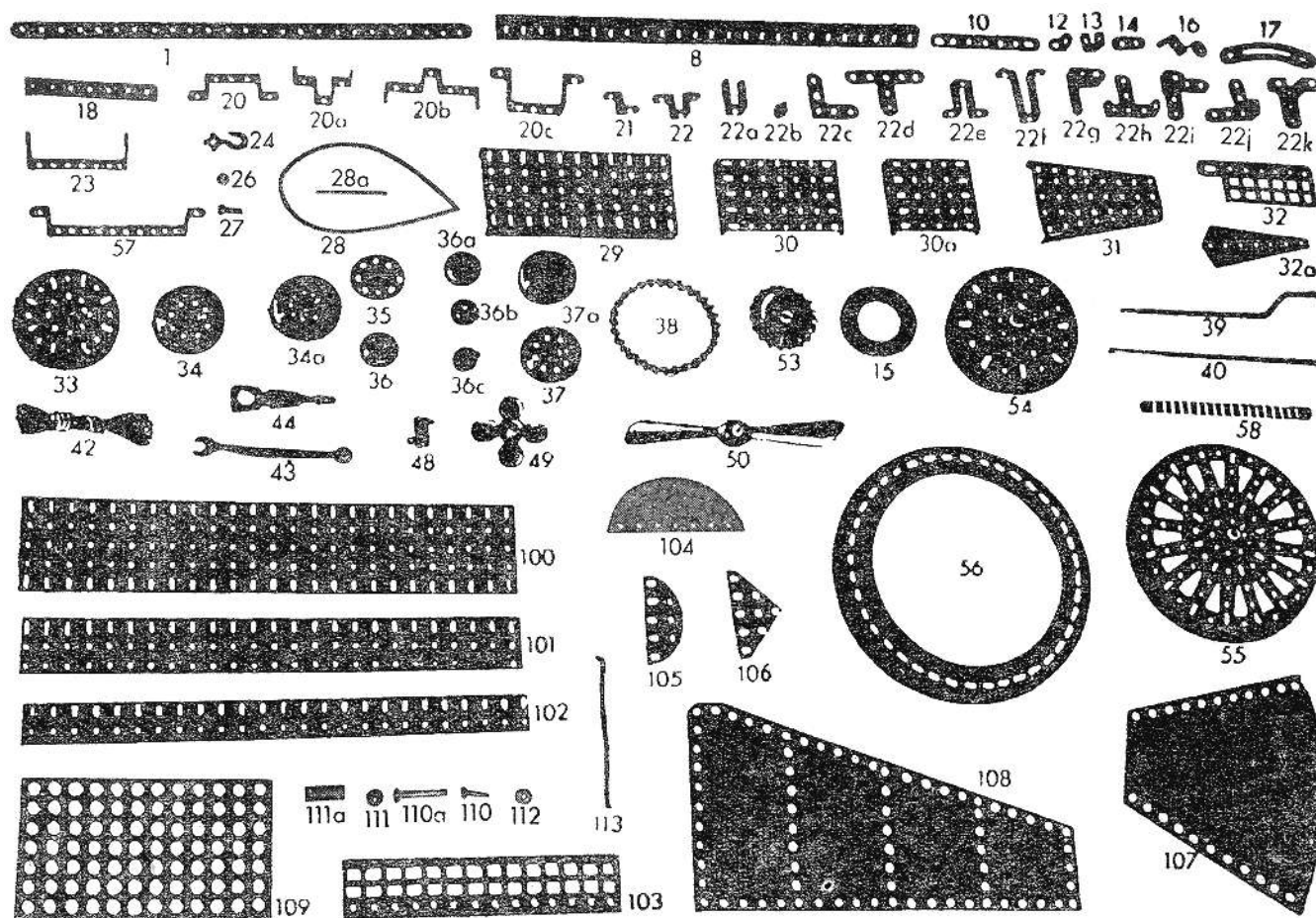
**#26\*** pressed **Nut**, hexagonal, 7.0mm A/F, & 2.0mm thick. [Plain steel.]

**#27-27d Bolts** are 6,8\*,12\*,15\*,20mm u/h. The main quantity in the No.6 should be the 6mm but are actually 8mm with 7.0 mm Ø round heads. The other lengths have 7.0mm Ø cheeseheads. [Plain steel.]

**#27e, a Set or Grub Screw**, is listed but none were found in the No.6 set.

**#28\* & #28a\* Spring Cord**, 64 & 143mm long, plus their small loop ends.





**#29\*,30\*,30a\* Flanged Plates** with slotted holes in their flanges as well as along the outer top rows of holes.

**#31\* Flanged Sector Plate** also has slotted holes in its flanges, and the ends are slightly curved. All the Flanged Plates have corners with small radius rounding. [Red.]

**#32\* Windmill Sail**, 100mm long o/a, and the 'oblong' part is 35\*80mm with fully radiused corners. The slotted hole in the arm is 12.0mm long. [Red.] {Red or yellow.}

**#32a**, see Fibre Parts on the next page.

**#33\* Flanged Disc Pulley** is 70mm Ø with a 16mm flange,

& MÄRKLIN pattern holes. [Unpainted.] {Blue}

**#34, 50mm Pulley** with a ring of 8 face holes. {Red or silver.}

**#34a, 50mm Flanged & Grooved Pulley**, right. As #34 but with a 'bowl' attached by the boss to give the flange. {Red or silver.}



**#35\*, 8h Bush Wheel**, 40.5mm Ø with a quite deeply recessed centre for the boss [Unpainted.] {Blue or silver.}

**#36\*, 25.0mm Fast Pulley** has an 8mm Ø boss. Its discs are formed to give parallel sides to the 4½mm wide 'vee'.

**#36a\*,36b\*, 18.0 & 25.0 Loose Pulleys** have belled centres and normal vees, 3 & 5mm wide respectively. The discs of the 25mm are joined by 3 irregularly spaced spot welds, and those of the 18mm by 2. [Unpainted.]

**#36c, 18mm Fast Pulley**, perhaps similar to the 25mm. {Red, bright, or silver.}

**#37, 40mm Pulley**, smaller diameter version of the 50mm, #34. {Red or silver.}

**#37a, 40mm Pulley**, right. It looks like a smaller #33 Flanged Disc Pulley but is made by using the boss peening to attach a 'bowl' (it looks like the one used in #34a) to one of the #37 discs. {Red or silver.}



**#38/33-56 Gear Rings**, steel, 9 to 9½mm deep, to fit over the 25\*,40,50,70\*,100, 150,190mm Ø circular parts. The 25mm has 13 teeth & the 70mm, 34. {Some are painted.}

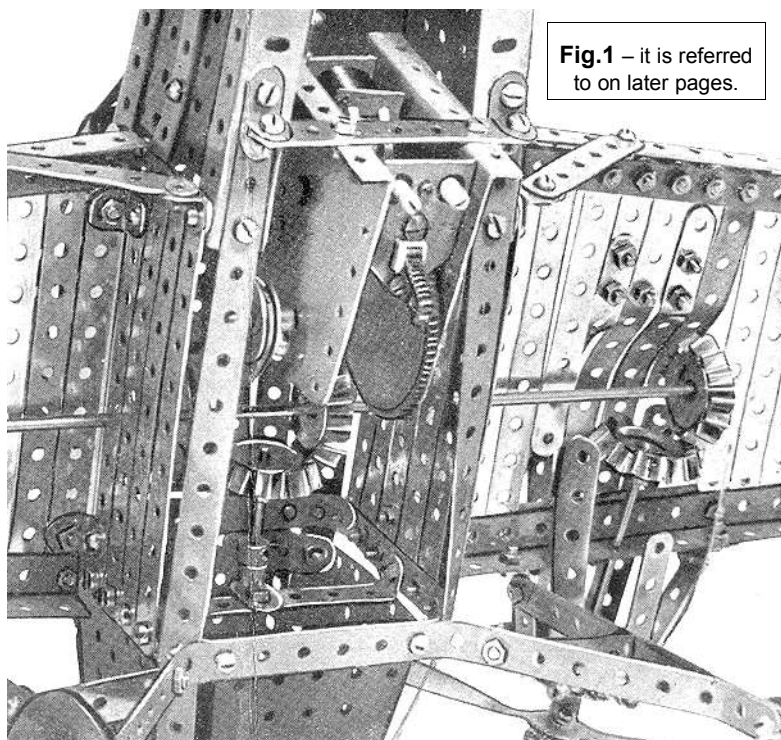
**#39,39a Crank Handles**, long & short. [Steel.]

**#40-41d Axles**, 30\*,20\*,15\*,13,11.5\*,9,7\*,5,3\*cm long, 3.95mm Ø with slightly rounded sheared ends. [Steel.]

**#42 Hank of Cord**. {Red.}

**#43\* Spanner**, 98mm long o/a, with a hex ring at one end

**Fig.1** – it is referred to on later pages.





and a deep opening with a semi-circular bottom at the other. [Steel, yellow]

**#44 Screwdriver**, flat, 72mm long o/a. [Steel, red.]

**#45 Manual**.

**#48\* Coupling**, nicked steel, 10.0mm Ø, 21mm long o/a. Double tapped at each end, with 13mm pitch in one example & 14mm in another.

**#49 Ship's Propeller**, scales at about 50mm Ø. {Bright or red.}

**#50\* Propeller**, 160mm Ø, no twist to blades, 8mm boss. [Unpainted.] {Red or silver.}

**#51,52,53 Bevel Gears**. All are a ring of formed steel teeth that push over the 25, 40, & 50mm Pulleys and snap into the vee groove. The smallest can be seen in Fig.1, a photo of the drive to the Propellers in the Aeroplane model on the manual covers. The angle of the teeth is about 30° and Werner noted that this isn't really enough, especially for the 40 & 50mm sizes. {Some are painted.}

**#54,55 Flanged Disc Pulleys**, 100 & 150mm o.d., are similar to the equivalent MÄRKLIN Flanged Discs but have a centre boss. Their flanges haven't been seen. {The #54 is green, but blue in one set.}

**#56 190mm Flanged Ring** looks similar to the MÄRKLIN part but has 40 slotted holes around its top face instead of 32. Its flange hasn't been seen.

**#57 long Double Bent Strip**. It is listed as having 11 holes and those seen have 7 holes along the top, so 11 in all.

**#58,58a,58b Rack Strips**. These are flat strips with a mounting hole at each end, and lengths of the Gear Ring material spot-welded on. They are listed as 7h, 11h, & 25h, and from a blurry photo have about 7,17,43 teeth. In a clearer photo #58a has 16 teeth. {Some are painted.}

**#110,110a Bifurcated Clips**, short & long. [Steel.]

**#111\*,111a Axles Stops**, short & long. The Short one is a 7mm length of 6mm o.d. red rubber tubing. #111a is only in Sets 7 & 8 and has not been seen.

**#113 Chain**, not seen but is shown as a fine (steering) chain in a Steam Roller model.

**The Fibre Parts** These are made from good quality 'cardboard', and range in colour from light fawn to a mid orange-brown. The **Small Windmill Blade #32a\*** is 90mm long, .7mm thick, and has only 6 holes along its length. **#100, 100g\* Plates 5\*25, 5\*11h**. #100g is .6mm thick and will flex into a semi-circle with only minor kinking outside the slotted holes. **#101,102,103** are probably of similar thickness. The sizes of **#104,105,106** are given as 110, 60, & 56mm. An actual #104 has 9 holes along the base & 4 holes along the vertical centre line. **#105** has 5 round holes along its base. **#106** hasn't been seen. 8 of **#107** are used to make the base of a Roundabout, and the outside is an arc of a circle. As well as the 11 holes shown along each edge there are 11 along the centre line, 13 around the outer curve, and 5 on the inner, straight edge. **#108\*** is a Wing, .8mm thick, as in the illustration. **#109** has 5.5mm holes at standard pitch, and the part seen appears to be 9h wide and over 17h long. The **Washer #112** is 10mm o.d., and about .5mm thick. It is included in all the sets and the No.8 has 300 for 500 Nuts. The comparatively few fibre parts in the No.6 set are accurately made but in Werner's No.8 the hole pitch among the different parts varies from 12.8 to 13.1mm.

**Quality** Werner wrote that his steel parts are solid with TEMSI-like rigidity. A little burr is evident on a few of the Strips, and the paint comes off very easily. The aluminium parts are less 'solid' but certainly adequately strong, and with the one or two exceptions already noted, are quite well made. Again though the paint is the weak spot and on the aluminium parts can be scratched off with a fingernail.

**The SETS** Models for Sets 1 to 8 are included in the manuals but only Nos.2-8 are listed in the Set Contents. No mention is made of linking outfits. The sets are progressive except that 5\*11h Fibre Plates are only included in Sets 2-6 – in the two larger sets they are replaced by the 5\*25h size. In fact various sizes of Fibre Plate are called up for many of the models and as will appear, were to be cut from the relatively generous quantity of the longer ones provided – 72 of the 25h in the No.8. Also needed for some models are the Plates 101,102,109 & the Railings 103, and these can be seen in the No.8 sets but are not in the Set Contents. It would be possible to cut a #100 to make a #101 & a #102. There are a few minor errors in the Set Contents of the different manuals but the only significant changes are that the 3 Bevel Gears, #51-53, are only included in the No.8 manual, and the 40mm Pulley #37a is only in the No.4. All these parts though are included in the list of parts alongside the Illustrated Parts in all the manuals.

The main parts in the No.2 set are 12 Strips, 4x 25mm Pulleys, a 5\*11h Flanged Plate, 5x 5\*11h Fibre Plates, and (only) 10 N&B. Also listed for the Set are 33 Clips, no doubt used to hold the parts in the box, but also needed for some of the models.

The number of N&B in the sets increase steady to 180 in the No.6, and then jumps to 400 in the No.7, & to 500 in the No.8. And that set has 44 A/Gs, 22 Flanged Plates, 2 each of the large circular parts, 17 Gear Rings, & 12 Bevels.



The **No.6** set is packed in a wooden framed box, 50\*35½\*4½cm, with hardboard top & bottom panels. The lid lifts off & its label, above, measures 29½\*21½cm. Kovová stavebnice at the top means metal building parts, and the set number has been rubber stamped on. A packing slip has IGRA printed on it, and the rubber stamped date 19.III.1959. Inside the box ply partitions create 10 compartments, and as found the parts were loose in them, but with many of the different types clipped together.

**Werner's No.8** is in a wooden box, 41½\*44½\*21cm with the lid missing, and the parts are in 6 white, partitioned cardboard trays, 37\*41½cm. Many of the parts are again clipped together and all the circular parts, and a few others are clipped to fawn backing cards.

One of the **Ebay No.8's** is in a lightish green cardboard box with the same lid label as the No.6. The parts seem to be in 5 trays, and their partitioning looks very similar to the 5 in the No.8 above.

The other **Ebay No.8** is in a red wooden box with a hinged lid. The small part of the label remaining is as before. The bottom of the box is subdivided by wooden partitions into 18 areas, with 5 along one side higher than the rest. The parts in all 18 are loose or clipped together. The others are clipped to white cards in 4 red-edged cardboard trays. I think 3 are sized to sit down on lower partitioning and the 4<sup>th</sup> rests on top of the other 3, and on the higher partitioning.

**Colour Schemes** All the metal parts in Werner's set are painted except the N&B, a few small nicked parts, & 2 of



the Bevel Gear Rings. Strips, A/Gs, DAS, most Brackets, Gear Rings, Rack Strips, & the 100mm Flanged Pulley are green. The Angle, Flat, Double, & Reversed Angle Brackets are painted black. All the other parts, including the Curved Strip, are red, except the blue Bush Wheels & 70mm Flanged Pulleys.

Only the larger parts of the 'cardboard' Ebay set can be seen clearly and they are similar to the above, except that the Bush Wheels and most of the 40 & 50mm Pulleys are silver. Some of the smaller Brackets & short Strips look bright, and the 'Gear' parts look dark but not green.

The main parts in the 'wooden' Ebay set are again similar except that the 100mm Flanged Pulleys are blue, and so again are the Bush Wheels. Of the 40 & 50mm Pulleys, 4 are red and the rest silver; the smaller Pulleys look bright. Strips of 7 holes or less also look bright, but the Curved Strip, and nearly all the DAS & Brackets, look brassy. Only the 2h deep DAS are green. The Propeller is silver, the Ship's Propeller bright, and the Windmill Sail yellow. The smaller Gear Rings look unpainted but those of 100mm & above look blue.

**The MANUALS** First, the type of manual most commonly found. It consists of loose cream sheets, 295\*210mm deep, printed in black, in a fold-over wrapper, printed in blue on a light background – from grey through green to blue, for the different examples seen. All the wrappers are similar except that the front of the No.4 (at the top of the next column) differs slightly from the others, and the one in MCS, in having no horizontal lines in the bottom panel and the typeface for VAŠEK is simpler. The MADE IN CZECHOSLOVAKIA bottom left is the only English in the whole manual.

The inside front cover has an introduction headed to 'Dear Young Friends' and after saying how good the toy is, there are notes on the fibre parts. It is explained that the sizes needed are to be cut from the larger pieces supplied in the Sets. It is also suggested that builders make their own plates for their models. The main uses of #108 & 109 are given, and some other applications – the sails of a Ship for example. The word decorative is used in connection with the Plate with the oversize holes, #109. It is said that the Clips 110 & 110a can be used instead of N&B to attach the Fibre Plates, and that using them is quick and easy. (Untidy also comes to mind as all in my set are 35mm long. But perhaps the shorter ones have got lost.) The Fibre Washers are to be used for spacing purposes, to protect the paint finish, and to prevent the N&B coming undone. Finally it is noted that the rubber Axles Stops, 111 & 111a, can be used instead of Collars, and also that they can be used as decorative parts.

The inside back cover is 'For the Parents' and mentions that VAŠEK is Czech made in Prague. Also that extra parts can be bought from toy shops.

The only item of interest on the back cover is the name of the manufacturer.

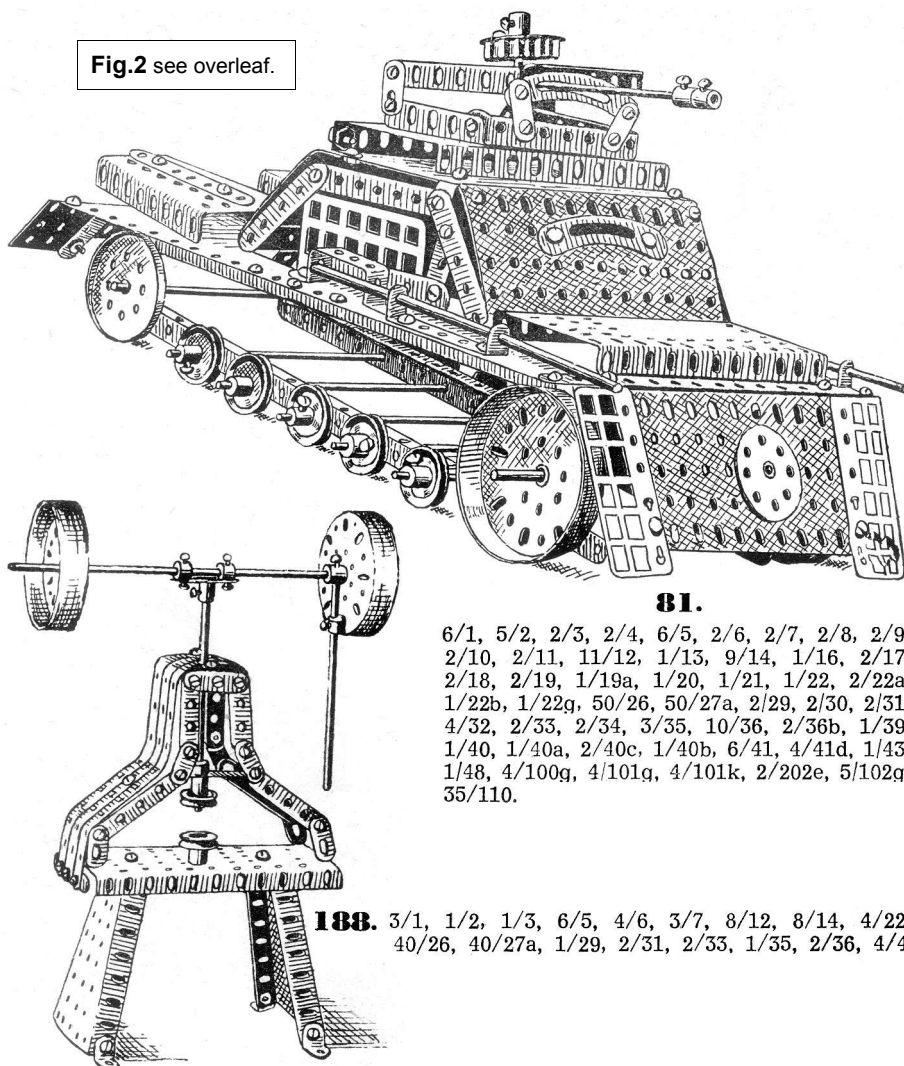
The first 6 pages of the loose sheets in the No.4, 6, & 8 manuals are almost identical. p1 shows the Illustrated Parts, and also the names of



the parts. pp2-3 have the set contents of Sets 2 to 8. p4 has line drawings of 12 basic constructions. pp5-6 list the models that can be made with each set, 229 in total, with names & model numbers. After that the sheets showing the models: all for Sets 1 to 4 in the No.4 manual; for Sets 1 to 6 in the No.6; but only the 7 & 8 models in the No.8.

The first & last models for each set are as follows, with my English names. Set 1: No.1, Rake on p7, to No.31, Sailing Ship on p10. 2: No.32, Luggage Barrow, p11, to 88, Monoplane, p18. 3: 89, Cart, p18, to 122, Mobile Ladder, p23. 4: 123, Saw Bench, p23, to 156, See-Saw, p28. 5: 157, Biplane, p29, to 180, Railway Bridge with Signal, p32. 6: 181, Tank, p33, to 209, Horizontal Steam Engine, p38. 7: 210, Mobile Sliding Ladder, p39, to 216, Jeep, p43. 8: 217, 3-Engine Monoplane (the one on the cover), p44, to 229,

Fig.2 see overleaf.



81. 6/1, 5/2, 2/3, 2/4, 6/5, 2/6, 2/7, 2/8, 2/9, 2/10, 2/11, 11/12, 1/13, 9/14, 1/16, 2/17, 2/18, 2/19, 1/19a, 1/20, 1/21, 1/22, 2/22a, 1/22b, 1/22g, 50/26, 50/27a, 2/29, 2/30, 2/31, 4/32, 2/33, 2/34, 3/35, 10/36, 2/36b, 1/39, 1/40, 1/40a, 2/40c, 1/40b, 6/41, 4/41d, 1/43, 1/48, 4/100g, 4/101g, 4/101k, 2/202e, 5/102g, 35/110.

188. 3/1, 1/2, 1/3, 6/5, 4/6, 3/7, 8/12, 8/14, 4/22a, 40/26, 40/27a, 1/29, 2/31, 2/33, 1/35, 2/36, 4/41.

Paddle Steamer, p58. On p59 is No.230, Machine Shop, as on p5a of MCS/FB, a model needing extra parts. As well as its normal page number each page has a page number for the Set; thus page 58 is also VIII./13.

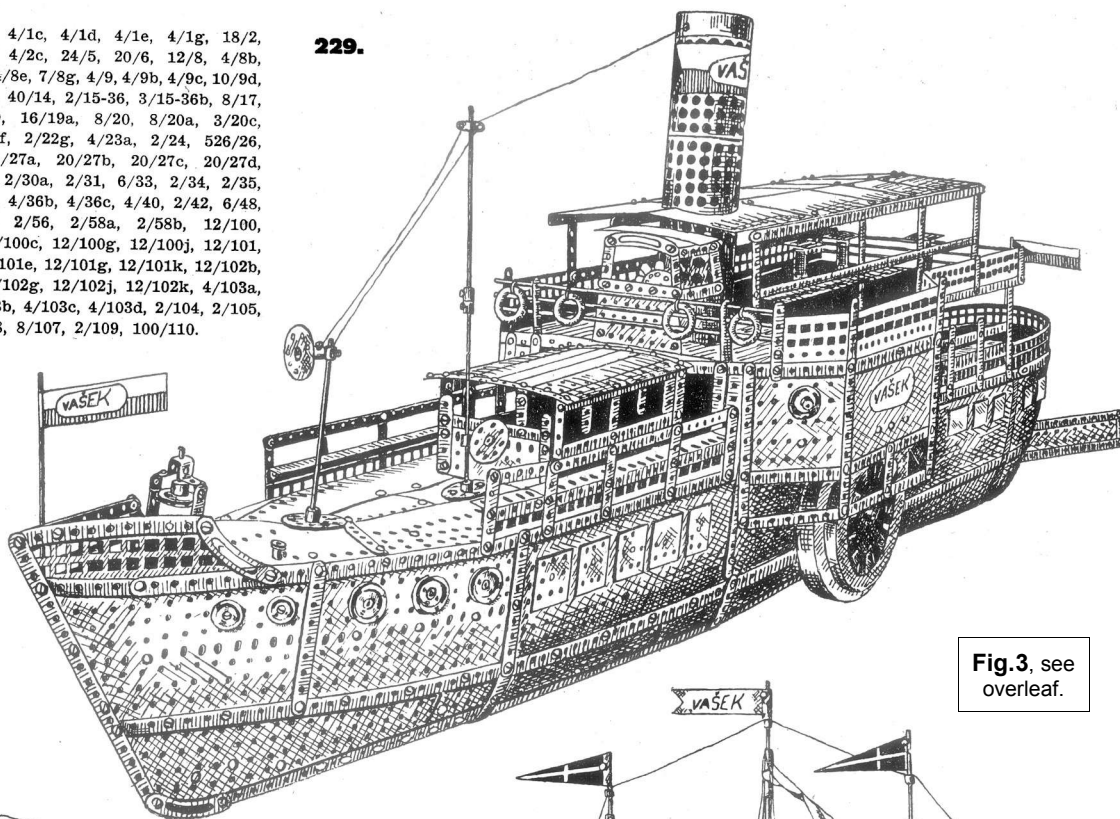
There is a line drawing and parts list for each model, with an additional view in a few cases. The models through Set 6 are mostly rather elementary and the majority don't do justice to the contents of the outfits. Some are recognisable as small prewar MÄRKLIN models but a number look

distinctly original. The Tank in Fig.2 for instance, the most adventurous No.6 model, but it does need a number of parts not in the Set. The Fly Press also caught my eye but as there are no Screwed Rods in the system I suppose it doesn't actually work. Many of the models need various sizes of the Fibre Plates.

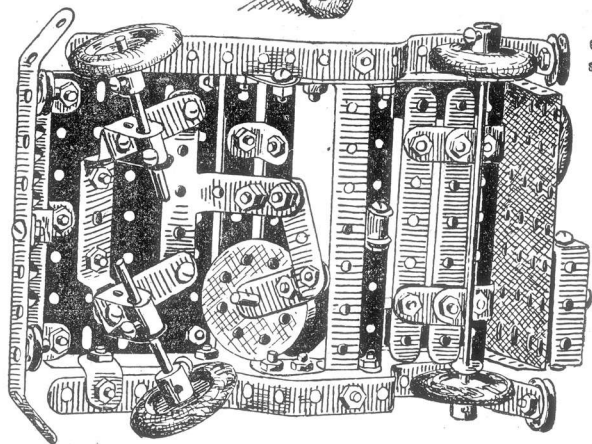
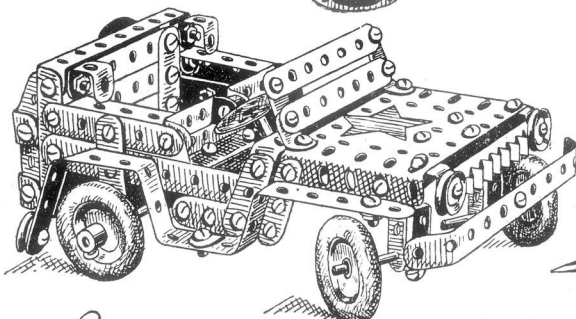
The No.7 & 8 models are a different matter with a number of original, large models. They include Aircraft, Locos & a Coach, a Tower that must be well over 6ft tall, a

20/1, 4/1b, 4/1c, 4/1d, 4/1e, 4/1g, 18/2, 4/2a, 4/2b, 4/2c, 24/5, 20/6, 12/8, 4/8b, 4/8c, 4/8d, 4/8e, 7/8g, 4/9, 4/9b, 4/9c, 10/9d, 40/12, 8/13, 40/14, 2/15-36, 3/15-36b, 8/17, 8/18a, 4/19, 16/19a, 8/20, 8/20a, 3/20c, 7/22d, 4/22f, 2/22g, 4/23a, 2/24, 526/26, 340/27, 100/27a, 20/27b, 20/27c, 20/27d, 4/29, 8/30, 2/30a, 2/31, 6/33, 2/34, 2/35, 7/36, 6/36a, 4/36b, 4/36c, 4/40, 2/42, 6/48, 2/54, 2/55, 2/56, 2/58a, 2/58b, 12/100, 12/100b, 12/100c, 12/100g, 12/100j, 12/101, 12/101j, 12/101e, 12/101g, 12/101k, 12/102b, 12/102c, 12/102g, 12/102j, 12/102k, 4/103a, 4/103, 4/103b, 4/103c, 4/103d, 2/104, 2/105, 2/106, 2/108, 8/107, 2/109, 100/110.

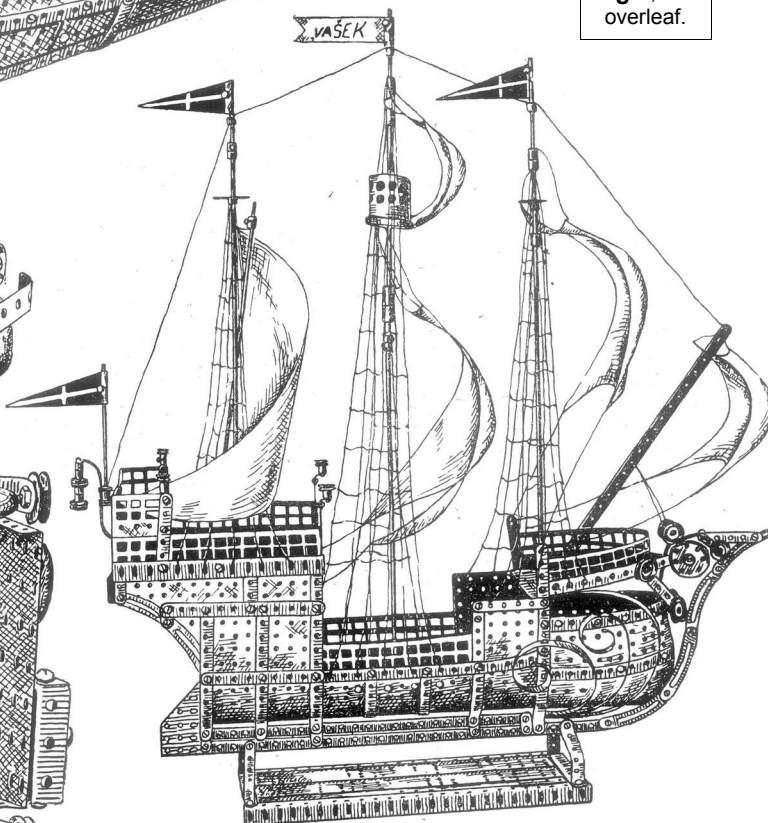
**229.**



**Fig.3,** see overleaf.



**216.** 2/1c, 1/2, 2/2a, 8/3, 2/5, 5/6, 13/7, 11/12, 2/13, 5/14, 5/15, 3/16, 3/18, 9/19a, 1/20, 6/22b, 1/22d, 2/22g, 95/26, 87/27a, 2/27b, 2/30, 1/35, 4/36, 2/36a, 4/36b, 1/40c, 2/41c, 1/41d, 1/58.



**221.** 22/1, 2/1e, 2/1d, 2/1g, 6/2, 1/2a, 2/3, 7/4, 12/5, 3/6, 1/7, 2/8, 4/8e, 3/8g, 12/12, 1/13, 8/17, 1/22a, 1/22g, 1/22h, 129/26, 129/27a, 2/29, 1/34a, 5/35, 8/36, 4/36a, 2/36b, 2/37, 4/10, 1/40a, 1/40c, 1/42, 5/48, 10/100, 3/100g, 2/101g, 1/101j, 3/103, 4/103b, 1/103c, 40/110, 3/111, 14/111a.



Steam Roller, a Big Wheel, a Galleon, a Jeep, & a Paddle Steamer. No Cranes are shown despite the large one on the lid label, and there are no 'mechanical' models, such as machine tools. None of the models are at all complicated mechanically and in some the details are not shown. Most of these though can be seen in extra views in the 'photo' manual described below. The No.7 Jeep, the only vehicle with 'proper' steering, & 2 of the No.8 models are shown in Fig.3, about ¾ full-size. The special model Machine Shop consists of some No.6 models - a steam engine and 6 machine tools - mounted on a baseboard, with the drive through overhead line shafting. It's impressive looking but again simple mechanically without for instance fast & loose pulleys on the shafting to allow the drive to each machine to be disconnected.

**Another Manual** Art paper pages from a manual, possibly later, have halftone photos of the No.8 models, & the No.230 special model. The pages are numbered 41-60 (with the first 5 also having VIII./1 to VIII./5 on them), and instead of being loose the sheets are double width and printed so they can be folded & bound in normal book fashion. The binding has been neatly done with sellotape, & black tape on the outside around the spine, but may not be

original. The models are as before but with many additional views, and alternative versions of the Tower, No.223, and the Railway Coach. No.228. The MCS/FB pages 5 & 5a are taken from these pages.

It is clear from some of the additional views that the propellers of the multi-engined aircraft models are geared together, and in at least one, the model on the manual cover, they are driven from an Electric Motor. This can be seen in Fig.1, and the Motor appears to have 6h wide flanged sideplates. A large gearwheel can be seen between them but I'm not sure what the seemingly similarly toothed strip coming out of the terminal plate is. An electric motor drive is also shown in an auxiliary view of the Big Wheel, instead of the Crank Handle, but what little can be seen of it looks different to the one in the Aircraft. There is no indication if either Motor was a VAŠEK item.

**An Earlier Manual?** The original p5 in MCS/NZ has a page from a manual with a completely different format to the loose pages. As shown the page size is smaller, and the pages may be bound. The Crane and Windmill on the page are identical to 'later' No.6 models, but unlike those they have names but no model numbers.

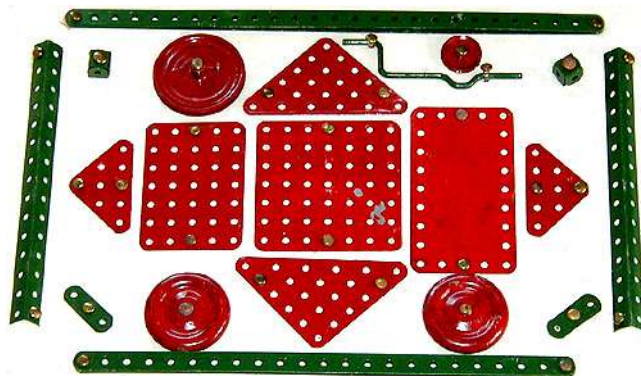
VAŠEK: S6

OSN 29/865

**Is It A Real ONADO No.4 Outfit?** The set in question came from the U.S.A. and David Hobson kindly let me examine it. No one as far as I know has hitherto seen a No.4, so why the doubt? First it has no label, and there is no sign that it ever had one. Second, the parts are red & green instead of the expected red & blue (see 15/405). Third, the manual is the one described in 25/728 with only models through No.3 in it, and mention of 'oiled' rather than painted parts. (The enlarged version with No.4 models was described in OSN 15.)

So what indicates that it is a No.4? Mainly that nearly all the parts listed in the later manuals, many of them rather unusual, are included, and only about half of them are in the No.3. Also the parts on one of the backing cards in the Set are, with minor exceptions, all of those in a No.3.

**The SET** The box is 29½\*42\*5cm, red outside, and white inside. The parts are attached to 2 white cards with the usual brass clips. One layer is identical to the No.3 shown in 25/728 except that the Tools are missing, the Strip parts are green, all the parts are painted, and there are 2 N&B boxes instead of one. The other layer is shown below and under it are listed the parts on it, and the N&B, with the quantities in curly brackets. Features not mentioned are as before.



- 3, 23, & 27h **Strips**. {4,2,2}
- 15h **A/G**, about 13\*13mm in section, with square corners, and all holes round. {2}

- 5\*7 & 7\*7h **Plates**. The corners are well rounded, unlike those of the Flanged Plates. {1,1}
- Large & Small **Triangular Plates**. The rows of holes at ½" pitch are parallel to the hypotenuse in the Small type. The Plates in 15/405 appear not to be ONADO because of the different hole pattern in the larger version. {2,2}
- 5\*7h **Flexible Plate**. {1}
- **Double Bracket**, about 14mm wide o/a. {4, a pair can be seen in each top corner.}
- **Pulleys**: 58mm Ø (right) & 25½mm Ø Loose. The discs of the 58mm have shallow circumferential corrugations, & the vee has parallel sides, 6mm wide. The o.d. of the boss is 9.8mm. {1,1}
- 'Balloon' **Road Wheels**, 51mm Ø. {2}
- **Single Throw Hand Crank**, 112mm long o/a. This part doesn't look much like the one in the OSN 15 Steam Hammer model. The Parts List also has a Bent Crankshaft which hasn't been seen - it cost 8d against 6d for the Single Throw Hand Crank. The Winding Handle cost 6d too. {1}
- **N&B** ⅝" BSW, with hex Nuts 7.9mm A/F, 2.3mm thick, and RH Bolts, 6.7mm Ø, 10mm u/h. {66 Nuts, 71 Bolts} Set Screws are all the long RH 4 BA, as in the No.3 in OSN 25.
- **Finish** Apart from the plain steel N&B all the parts are painted, including Axles, bosses & Set Screws. Plates, Wheels, & Set Screws are red; all the rest green. The red is a little darker than the shades in the photos here. Both red & green are glossier than the blue/red parts. The paint finish is poor with many runs & thick patches, especially on the 'new' red parts.



**CONCLUSIONS** The most likely explanation is David's, that this set was just a mock-up or sample of a proposed new set. In that case the No.4 manual might well not have been available, and perhaps a different lid label was being considered. On the colours, it could be that the set was produced before a definitive scheme was decided to follow the unpainted sets, and red/blue was finally adopted. A pointer to a red/blue No.4 is the blue A/G reported in 21/615.

ONADO: S1

OSN 29/865

**'New' System TEKNO** This system is from Israel and its 4-letter name in Hebrew (or Yiddish, I'm not sure which) can be seen on the manual cover, and on the lid below. I'm told that it would be TEKNO in English. At a glance the parts look just like VAŠEK, and the very close connection between the two systems can be seen in the parts list & manual models. But though the range of parts is virtually identical, nearly all the actual parts are different to some degree or other, and the thread & Axle diameter are different. So it's likely that TEKNO is an Israeli product, with a very small chance that the parts were copies of VAŠEK from a period as yet unknown. Or that the parts were Czech



made from that time.

These notes are based on my near complete No.4 outfit and, thanks to David Hobson, a lot of parts, probably most of two No.4's, which show some differences of detail.

**The PARTS** The Illustrated Parts in the manual is identical to the VAŠEK one on p861, and apart from the bosses all the metal parts are steel. The notes that follow refer to the No.4 set parts, with variations from David's lot in square brackets; major differences from VAŠEK are mentioned.

**Colours** Strips & A/Gs are green; Brackets are nicked; and other parts are red, blue, or yellow. Details & exceptions below. One of the No.4 sets in the lot has green & blue parts of the same medium shades as in my No.4, but the other has the same parts in distinctly lighter colours (the two blues can be seen in Fig.1).

**Basics** Unless stated otherwise: holes are 3.9mm (Bolts & Axles are a snug fit in them) at 13.0mm pitch. Strip parts are 12.9-13.3mm wide (up to 1mm wider than VAŠEK) and have not quite fully rounded ends. Plates & A/Gs have square corners. Slotted holes are 7.9-8.4mm long.

**Bosses** are not like VAŠEK. They are brass [some brass, some aluminium, no doubt from the two different No.4 sets in the lot], 9.0mm o.d., 4.1-4.2mm bore [4.0-4.1], and 12½mm [some 11½mm] long, single-tapped, with deep, slightly recessed peening.

**Threads** All are ⅝<sub>32</sub>" BSW (not VAŠEK's M4).

**#1-7 Strips** with 25,11,7,6,5,4,3 holes. The holes centres in some 25h are 1mm short overall. The 3 & 4h are quite thin (.6mm) and are nicked.

**#8,9 A/Gs**, 25,10h long. The 10h is listed as 11h [11h]. 16\* 15mm in section. Slots are 4.0mm wide.

**#10,11 Strips with Slotted End Holes** None found but extra 7 & 5h normal Strips instead.

**Brackets** **#12 A/B**, made from the **Flat Bracket #14** (both as VAŠEK). **D/B #13**, 15.0mm wide [14.5mm].

**#15/36,36b Rubber Rings** to fit 25, 18mm Pulleys. Black rubber about 36 & 28mm o.d., and 6mm wide.

**#17 Curved Strip**. Blue. The slotted hole at one end is only 7.3mm long.

**#18,19,19a DAS**, 7,3,5h long, 1h deep. The 3h is nickel, the others green. [All green.]

**Brackets: #20** – as illustrated but 5h long along the top,

## Leading Particulars of TEKNO

**Country** Israel

**Maker** Possibly a company called Adloyada.

**History**

**Hole dia.** 3.9mm.

**Hole pitch** 13.0mm.

**Sets** Nos.1 to 7 (also called I to VII).

**Material/Finish** Steel. Strips & A/Gs are green; Brackets nicked, other parts red, blue, or yellow.

**Bosses** Brass or aluminium, 9.0mm Ø, s/t ⅝<sub>32</sub>" BSW. Bore 4.0 – 4.2mm.

**Fixing** Nicked steel ⅝<sub>32</sub>" BSW N&B. Hex Nuts 8.0mm A/F. RH Bolts, 7.0 & 6.7mm Ø.

**Axles** 3.80mm Ø.

**Motors** None.

**DP** 12 (Mod. 2.1).

**Remarks** Manual indicates a strong connection with VAŠEK but the parts, though very similar, are not identical

green.

**#21 Rev. A/B** has 3 round holes and short lugs with only 2mm [3mm] of metal outside the holes.

**#22 Double Bent Strip** has, unlike VAŠEK, round outer holes.

**#22a D/B 2h Deep.**

**#22b Collar**, brass, s/t, 9.0mm Ø, 10.0mm long [Brass, 8½mm long; aluminium 9½mm long].

**#22d 3\*5h T-Bracket**, and made from it is **#22g** with the 2h long sides of the 5h cross arm bent up at 90° to the 3h arm.

**#24 Hook**, flat & 31mm long, but otherwise unlike the VAŠEK part. David's parts had one identical part and a different shaped flat Hook, 27mm long with a 2.3mm hole Both are nickel plated and are shown in Fig.1.

**#26 pressed Nut**, hexagonal, 8.0mm A/F, 2½mm thick, nickel plated.

**#27-27d Bolts** have 7.0mm round heads & are 7mm u/h (6 & 8mm are listed) [6.7mm Ø, 8mm u/h]. Nicked.

**#28 Spring Cord**, 290mm [262mm] long plus small loop ends.

**#29,30 Flanged Plates** have slotted holes in their flanges, in the outer top rows of holes in the 5\*11h, and, unusually, in the outer 2 rows each side in the 5\*7h. Red. The hole pitch is 13.1mm along one 5\*11h, and 13.3mm along the other.

**#31 Flanged Sector Plate** is blue. It also has slotted holes in its flanges, and, unlike VAŠEK, the ends are straight.

**#32 Windmill Sail**. Smaller and different to the VAŠEK part, it is shown in Fig.1. 75mm long o/a, the 'oblong' part is 31\*63mm, and the large holes 15mm Ø. Blue.

**#32a Windmill Sail** is steel and smaller than the VAŠEK fibre part. Also in Fig.1, it is 64mm long & 19mm wide. Blue. All the other VAŠEK fibre parts have PN's of 100 or above, so perhaps the original VAŠEK part was metal.

**#33 Flanged Disc Pulley** is yellow, with a 15mm flange which tapers outwards from 68mm to 70mm Ø. Otherwise as the VAŠEK part except the pulley groove is much deeper (2 v. ½mm) & wider (6 v. 2mm). [Brass or painted aluminium bosses.]

**#35 8h Bush Wheel**, 39mm Ø red disc with no centre recess.

**#36,36b, 25mm Fast & Loose Pulleys** are 26mm Ø with a normal vee 5½mm [7mm] wide. The Loose type has a 5mm long boss [4mm long boss, brass or aluminium]. The Fast Pulley is red, the Loose blue.

**#36a, 18.0mm Loose Pulley** – the nickel discs are joined by



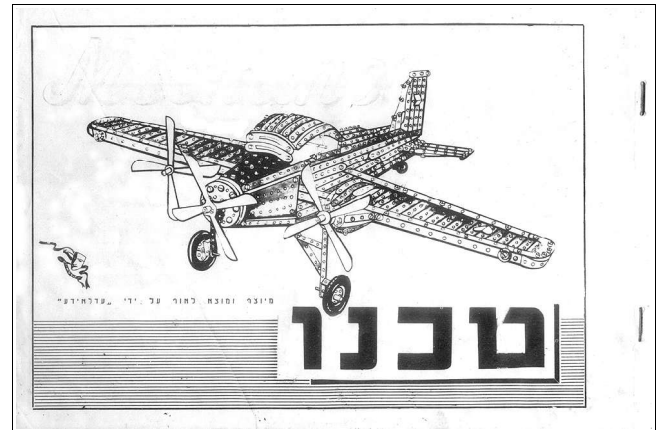
- tiny tabs through the centre hole, 4mm wide vee [discs joined by 4mm long bush, brass & aluminium, 5mm vee].
- #36c, 18mm Fast Pulley**, like the 18mm Loose Pulley above but with a normal length bush.
- #38/33,36 steel Gear Rings**, 6½mm [7mm] deep, to fit over the 70 & 25mm Pulleys, 35 & 14 teeth, 1 more in each case than VAŠEK.
- #39 Crank Handle**, 142mm long o/a with a 16mm handle offset about 20mm.
- #40-41d Axles**, 30,20,15,13,11½,7,3cm nominal lengths but many are up to ½cm longer. 3.80 mm Ø (VAŠEK 3.95mm). Nickel plated with slightly rounded sheared ends. [Some are BZP.]
- #42 Cord**. A long length of white cord was found attached to the Hook.
- #43 Spanner**, see Fig.1. 90mm long o/a, each end is cranked by a few millimetres and has a straight semi-circular bottomed opening. Nickel.
- #44 Screwdriver**, see Fig.1. Flat, with impressed centre, 76mm long o/a. Nickel. [2 different screwdrivers were in the lot, one nicked wire similar to MECCANO, 116mm long o/a, and one with a translucent yellow plastic handle & BZP blade, 137mm long o/a.]
- #45 Manual**.
- #48 Coupling**, unlike the VAŠEK one it is brass, 9.0mm Ø, 24mm long o/a, and has 3 s/t MECCANO-pattern bores. Unfortunately the outer pair are at 15mm pitch. [Better made with the outer bores at 13mm pitch, but the middle bore is not quite central in one example. 23½mm long.]
- #50 Propeller**. At 111mm Ø, a lot smaller than the VAŠEK part, and the blades have some twisted. Blue. [Brass or aluminium boss.]
- #111 Axle Stop**, short. [Spring Clips were also found in the lot, along with some ¾" Washers & the wire Screwdriver mentioned earlier – they could all be MECCANO parts.]
- The Fibre Parts** Long 53 hole lengths of the 3 types #100-102, each folded into three. They are made from quite unsuitable, orange cartridge paper (.033mm thick), which has little rigidity and kinks very easily if curved. The pitch of the holes varies from 13.0 to 13.3mm. These 'strips' would be cut to length to provide the parts needed, and called up, for the manual models.
- Washer #112** No paper Washers were found, instead thin steel ones, 10mm Ø, with a grey metallic finish. [1 aluminium washer found, 9.5mm Ø.]
- Quality** Similar to VAŠEK overall, apart from the 'Fibre' parts, but the paint seems to stay on appreciably better.

**The SETS** Sets 1-7 are included in the Set Contents in the manual and Nos.2-7 are nearly identical to those in the VAŠEK manuals. (Parts #37a & 51 are included.) The only difference is that a number of different lengths of the Fibre Plates #100-103 are listed. These are 25,21,15,11,5h for #100 & #103; 25,21,15,11,5, 3h for #101; & 21,15,11, 5,3h for #102. As already noted these parts in the No.4 would have to be cut from the long lengths supplied.

The No.1 has the same 10 N&B as the No.2 but fewer Strips, Brackets, and only two 25mm Pulleys.

It is interesting that the total parts count for the different sets are the same in both the TEKNO & VAŠEK manuals, and that they are correct in the former, but too high in the latter because only the 11 & 25h long #101's are included. This would seem to indicate that the TEKNO Set Contents, and no doubt the VAŠEK equivalent at the time, were from a period before the known VAŠEK manuals.

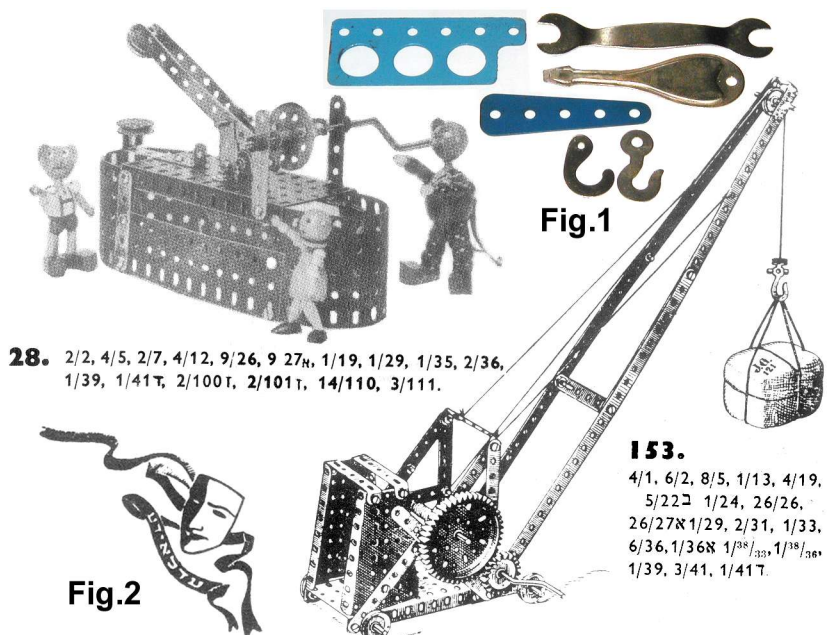
The No.4 is in a green box, 25\*34½\*7½cm, with the lid already shown. The parts were loose but would have been clipped to the white cards in the 2 remaining white trays – there would be room for a third, or perhaps there was a card resting on the bottom of the box.



**The MANUAL** It consists of 15 sheets, 243\*164mm, plus the front cover above, stapled together (on the right, the pages read from top right to bottom left), and printed in B&W. The logo from the cover is shown in Fig.2, about 150% natural size. The word in it, and also the first word in the line of text below it, is Adloyada in English, and means carnival. On the original is the word *Mechano*, starting inside the frame at top left, and extending to the model's fin. But it is so very faint & patchy that it can barely be seen, and it may be that it has been imperfectly erased before printing.

The inside cover is blank and then the pages 1-30 are similar to those in the VAŠEK manuals. The Model Names on pp5-6 are for Sets 1-7. Pages 7-30 have the models for Sets 1-5, and are also numbered I./1 to V./4 in VAŠEK-style. Due to the smaller page size some rearrangement of the models has been necessary and 2 more pages are used than in the VAŠEK manuals. Some of the model illustrations are identical to the VAŠEK line drawings but the majority are halftones, usually with a similar view to the VAŠEK drawing. Small doll figures have been added to many of the halftone models and these can be seen in one model, a Roundabout, in the No.8 halftone VAŠEK manual.

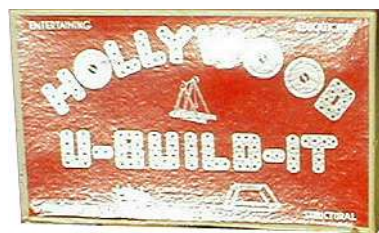
The No.1 Set #28 Hammer below shows three of the many doll figures used. The No.4 #153 Crane is the only model which makes use of the Gears. Both illustrations are natural size.



**'New' System: CONSTRUCTO** A set recently to hand is very similar to the HOLLYWOOD U-BUILD-IT outfit described in 11/287. The most unusual feature in both is the pattern of holes in the Strips -  $\frac{3}{16}$ "  $\varnothing$  at  $\frac{7}{16}$ " pitch, with two  $\frac{1}{8}$ " holes between each pair of  $\frac{3}{16}$ " holes, near the Strip's edges. The Model Sheets too (with their ERECTOR models) are the same, but with two exceptions. At the bottom the GOLDEN STATE CONSTRUCTO name remains, & only F.K.HAAS has been obliterated. And rubber stamped on at the top in red is: LITE STEEL PRODUCTS COMPANY // 4427 SAN FERNANDO ROAD // GLENDALE 4, CALIFORNIA. So it seems that CONSTRUCTO came before the HOLLYWOOD period.

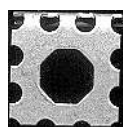


The **boxes** are probably similar for both sets, 10\*6\*1", and divided into 5 areas by partitioning stapled to the sides of the base. The CONSTRUCTO lid is shown above and the Haas name can still be seen at the bottom - it had been obliterated but the ink has faded with time. The LITE STEEL etc has also been stamped on the bottom border but is very faint. Under CONSTRUCTO & 'OF HOLLYWOOD' is: 'REG. U.S. PAT. OFFICE.' The models on the lid show the actual Strips, Flanged Plates, & Wheels, whereas the 3 models on the HOLLYWOOD lid are some of the ERECTOR models on the Model Sheet. (The HOLLYWOOD lid is on p2 in MCS and as can be



seen from the small blurry photo of it above, it is completely different.)

The SET NO. 200 at the top of the CONSTRUCTO lid is the only indication that there might be other outfits. Only one, unspecified, size of HOLLYWOOD is known.



The only difference in **the parts** is the A/B. Both arms are the same, as shown left, full size - the width varies from 14.5 to 15.1mm. Before bending the part is cut from a steel plate pierced with octagonal holes, .28" A/F, at about .58" pitch, and with rows of .11"  $\varnothing$  holes at .19" pitch in between.

I wonder what the plate was used for originally.

A few other points about the parts, and they most probably apply to the HOLLYWOOD ones as well.

- Different **Strips** vary from 12.6 to 13.0mm in width.
- The centre hole of the **Wheel** is 6.4mm ( $\frac{1}{4}$ ") diameter. The Bolt is just long enough to locknut a Wheel to another part but it is difficult to centre it accurately enough to prevent wobble.
- The holes across the **Flanged Plates** are at  $\frac{7}{8}$ " pitch, twice the  $\frac{7}{16}$ " of the Strips, but along the length they are at  $1\frac{3}{8}$ " pitch, or multiples thereof. Thus they do not quite mate up with the  $x\frac{7}{16}$ " holes, and this is most likely another case of parts made from an item originally intended for some other purpose.

The **contents** of the Set as found were: 10,9,10,7,10, 17 of 18,14,12,7,5,2h Strips; 18 A/Bs; 8 Wheels; 1x 6" & 2x 3 $\frac{1}{4}$ " long Flanged Plates; 26 bolts & 19 Nuts. There were no Tools (MCS shows a Span'driver & a pair of Pliers for HOLLYWOOD).

## Leading Particulars

**Name** GOLDEN STATE CONSTRUCTO

**Country** U.S.A.

**Maker** Lite Steel Products Company, 4427 San Fernando Road, Glendale 4, California.

**History** Perhaps soon after WW2.

**Hole dia.** 4.8mm.

**Hole pitch** 11.1mm ( $\frac{7}{16}$ ") in Strips;  $\frac{7}{8}$ " across &  $1\frac{3}{8}$ " along in the Flanged Plates.

**Sets** Only No.200 known.

**Material/Finish** Natural aluminium with plain steel A/Bs.

**Bosses** None.

**Fixing** 6-32 steel N&B. Hex Nuts, 7.8mm A/F, untreated;  $\frac{5}{16}$ "  $\varnothing$  mushhead Bolts with cross recess,  $\frac{7}{16}$ " u/h, and a pale green finish.

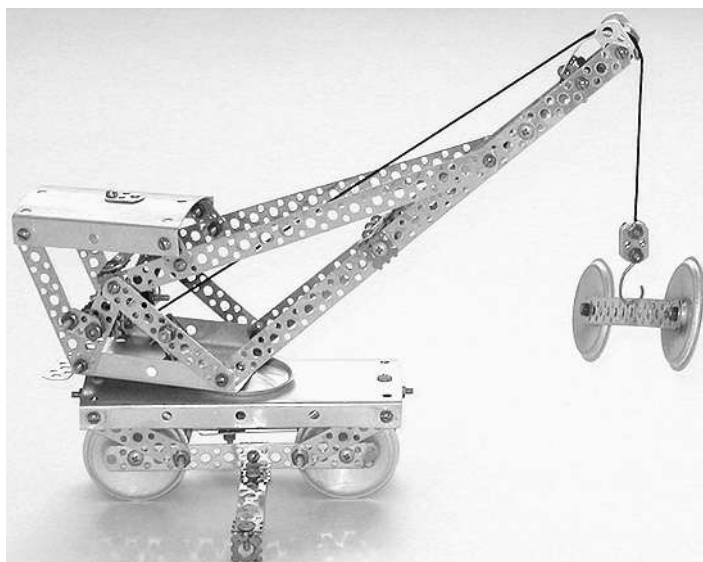
**Motors/Gears/Bosses/Axles** None.

**Remarks** Identical to HOLLYWOOD U-BUILD-IT in most respects, and probably preceded it.

The Crane on the lid would need a Hook, a Pulley smaller than the Wheel, and a winding drum of some sort, but none of these were in this set, nor in photos of 2 HOLLYWOOD sets.

The 20h Strip, DAS, & Axle Rod mentioned in MCS haven't been seen either, and it's possible that the last two at least are parts needed to make the ERECTOR models on the Model Sheet and were never CONSTRUCTO or HOLLYWOOD parts.

**Models** There aren't many different parts but as found there were a reasonably generous number of each, enough to make much better models than those on the Model Sheet. A quite respectable Bridge would be possibly & I made the little Railway Crane below. The non-original parts are the wire hook, some RH bolts & smaller hex nuts (over 60 N&B were needed). A winding drum of oblong cross-section was contrived from 5h Strips & A/Bs, with the shank of a Bolt at each end to allow rotation and to carry a winding handle on one side. Other 'features' are a built up pawl to engage with the drum, and pivoted outriggers on either side. I tried and failed to make a band brake and a jib head pulley. A Screwed Rod would be needed for either. The Wheels on the undercarriage look rather too large perhaps, but one was just the right size to act as a slewing ring.





**A Small Norwegian TEKNO Set** Some notes based on TEKNO 'paper' items were given in 5/102 & 26/769, but now a No.00 set is to hand, complete apart from the Cord. There is nothing positive to indicate its age but by repute it is from the early 1950s. The Set has all steel pieces, including one part, the #126b Corner Bracket, that was in the 1964 List but not in the OSN 26 '1940s' & '1950s' material. So this Set may well have come after the 'aluminium' period. The only mention of other sets is a reference to a No.000 on the back of the box.

**Packaging.** The parts are in a white tray which slides into the sleeve below. It is 22\*12<sup>3</sup>/<sub>4</sub>\*2<sup>1</sup>/<sub>2</sub>cm, and has 'TEKNO SETT – NR. 00' on its side. Two small 'matchboxes', 5<sup>1</sup>/<sub>2</sub>\*3<sup>1</sup>/<sub>2</sub>\*1<sup>3</sup>/<sub>4</sub>cm, with 'TEKNO smådeler skruer og muttere' in white on their blue tops, house the small parts and the N&B.



**The Parts** are generally well made but are mostly rather thinner than normal. All except the bosses are nickel plated with a very bright & shiny finish. They mostly resemble MECCANO or where different, are like their illustrations in MCS & OSN 5. The main features not in the panel (top right) are noted in the list of the parts below - quantities in the Set are given in curly Brackets. The inventory is very similar to the prewar MECCANO No.00, but with a few changes including 2 of the A/Bs replaced by Corner Brackets, and 10 extra N&B.

- **Thickness** of parts. Most are between .5 & .6mm thick, but the DAS & 11h Strips are .8mm, and the 5h Strips 1.3mm.
- **Ends & corners** are fully radiused, or nearly so for the Strips.
- **Strips.** The 5 & 11h {6,4} are 12.7mm wide. The DAS {2} is 64<sup>1</sup>/<sub>2</sub>mm long o/a (near the early MECCANO pattern). The Curved Strip {2} is like M90a but without the joggles and at 8.3mm, the slots are a little longer.
- The **Flanged Plate** {1} is as shown in OSN 5, with four flanges and both slots of normal width.
- **Trunnions** {2 + 2 Flat}. Compared to MECCANO they are smaller by 1mm in width & 1.2mm in height, and their rounded tops are noticeably flatter.
- **Brackets.** The Flat Bracket {4} has a 4.3mm hole, an 8.8mm slot, and 3.8mm of metal outside the round hole. The A/B {6} is made from the Flat one and has arms of nearly equal length, rather like the MÄRKLIN part. The 2h deep D/B, #44, {1} is made from a thinner 5h Strip. The Reversed A/B {1} has 3.4mm of metal outside the slotted hole. The #126b Corner Bracket {2}, right, has 4.3mm holes – it is not illustrated in any known literature nor, as far as can be seen, is it used in any manual models.
- The **Pulley** {4} is 28.8mm o.d. and 5.0mm wide. The **Bush Wheel** {1} is 35.6mm Ø with a recessed centre to accommodate the peening. The pcd of the 8 holes is 26mm.
- The **Axles** are 50 & 90mm long {2 each}. The **Crank**



## Leading Particulars

**Name** TEKNO

**Country** Norway

**Maker** Tekno A.S, En Gros Forhandler, Thormod Walderhaug A.S.

**History** From perhaps c1930 to after 1964.

**Hole pitch** 12.7mm. **Hole dia.** 4.2mm (a few 4.1/4.3mm).

**Sets** 000-3; 0A-3A; Universal; X; K1, Eifeltårn; K2, Havnekran; K.III, Heisekran m/d grabb; K.IV, Gravemask.

**Material/Finish** Bare aluminium around 1950, otherwise steel. Parts nicked after the aluminium phase, and a red Flanged Plate was bought in 1970.

**Boss** Brass, 9.7mm o.d., 4.09mm bore, 10mm long, double-tapped <sup>5</sup>/<sub>32</sub>" BSW. Deeply recessed peening.

**Fixing** Nicked steel <sup>5</sup>/<sub>32</sub>" BSW N&B.

Nuts are square, 6.3mm A/F & 2mm thick.

Bolts have round heads, 6.8mm Ø, & are 6.3 & 19mm u/h.

**Axles & Crank Handle:** 3.95mm Ø nicked steel with sheared ends.

**DP**

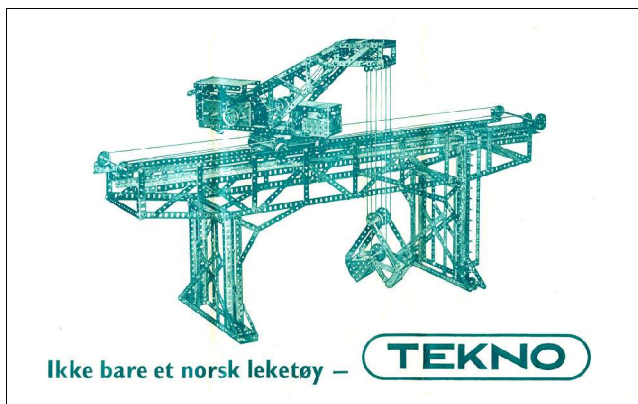
**Motors** 1 C/W (#183); 1 Electric (#187).

**Handle** {1} is 130mm long o/a but is otherwise like M19s.

• **N&B** {30 Nuts, 26 Bolts, & 4 Long Bolts}. **Grub Screws**, #69, {5} are fitted to the bosses. The wire **Screwdriver** is 135mm long o/a and is somewhat smaller than usual handle (see 5/102) is 38mm long & 28mm wide.

• The **Spring Clip** {4} is like M35 but somewhat pointed at the top. The slightly unusual **Hook** (#57, see 5/102) is stamped from 1.6mm thick flat steel, and is 31mm long o/a.

**The Manual**, in Norwegian, has 8 unnumbered pages, 297\*183mm, all printed in dark green on white. It is folded into three to fit in the box. No mention is made of the maker's name or address. The front cover below is followed by an Introduction on p2, identical to that in the OSN 5 manual, but with a slightly revised layout. Then 12 No.00 models on pp3-4, from Godsvogn (Goods Wagon) to Kappsag (Circular Saw), and 17 No.0 models on pp5-7, from Personvogn (Passenger Coach) to Boretårn (Drilling Rig). The back cover, p8, has a photo of a large Excavator, and the printer's name, Hestholms Boktrykkeri, Oslo.



There is a photo & a title for each model and they are all identical to those for Sets 00 & 0 in the OSN 5 manual.

The manual has no Parts List or Set Contents but a printed slip found in the box gives the PN's of the parts in the Set 00 and their quantities. Perhaps there was originally an Illustrated Parts List to go with it.

**'New' System: PIONIER CONSTRUCTOR** All that is known of this small Romanian system is a manual that David Hobson kindly lent me. The name is taken from the manual cover below but 'PIONIERUL CONSTRUCTOR' is used in the instructions on the back cover. There is already a PIONIERUL CONSTRUCTOR in MCS and from the very limited information given about it the two systems could be related, or even the same. MCS gives the hole pitch of PIONIERUL as 12.8mm and from the few dimensions given for PIONIER it is about ½", so it could be 12.8mm. However the makers' names are different with Metaloglobus in MCS and Bucuria-Copiilor on this manual. In both cases the only address given is Bucharest. Also the model shown in MCS isn't among the 62 in this manual.



The manual is in fact 7 unnumbered loose sheets (pp1-13 - p14 is blank), 247\*347mm, inside the covers (c1-c4). The full maker's name is given on c1 (see panel), and the circular logo has a loco pulling a letter 'B' (a larger copy is shown among the models opposite). The TIP II is the set number but both Sets 1 & 2 are covered. c4 is the same blue as the front with a white centre panel headed INSTRUCTIUNI DE FOLOSIRE (Instructions for Use - but probably of a very general nature). At the bottom are the name of the printer, Poligrafica "Luceafarul", and the reference 'MODEL 219-64 / N.I.I / LEI'. c2 has a table giving a list of the parts in Set 1 and those needed for each of the Set 1 models. Another table on c3 provides the same information about Set 2.

The 33 parts are listed below and most can be seen in the three models, and the parts of two others, shown here. The contents of Sets 1/2 are given in curly brackets.

- 2,3,5,7,11,21h **Strips** {2/8,2/6,6/10,4/6,4/6,-/6}. A 1\*5\*11h **DAS** {4/4}. A 5h **Curved Strip** like M90a {-/2}.
- 5\*5h & 5\*11h **Flanged Plates** with MÄRKLIN pattern slotted holes. {-/2,1/1}, and an 8h long **Flanged Sector Plate** shown with round holes in the flanges and only 3 holes across at the wide end {1/2}.
- An **A/B** {4/10}.
- An 8h **Bush Wheel** {1/2}. Fast & Loose 2h Ø **Pulleys** {2/2,2/2}. A 78mm Pulley (it looks like a larger version of the 60mm Ø MERKUR part) {-/1}. A Push-fit plastic **Road Wheel** {4/4}.
- 50, 100, & 200mm **Axles** {1/1,1/2,-1}. A **Crank Handle** {1/1}. 50, & 100mm **Screwdriven Rods**, used as axles with Loose Pulleys nutted on them {1/2,2/2}.
- A **Hook** {1/1}. A **Collar** {-/2}. **Cord** {1m/2m}. A 50mm long **Spring**, used to tension Cord driving bands {-/1}.
- 8 & 12mm roundheaded M4 **Bolts** {30/70,-/2}. An M4 hexagonal **Nut** {30/70}. A **Washer** {10/20}. A **Screwdriver** & a **Spanner** {1/1,1/1}.
- The **colours** of the parts in the photo on the lid are as follows. Blue: 11 & 21h Strips; 5\*5h Flanged Plate; Flanged

## Leading Particulars

**Name** PIONIER CONSTRUCTOR

**Country** Romania

**Maker** Fabrica de Jucarii Mecanizate  
"Bucuria-Copiilor" - Bucuresti.

**History** Possibly 1960s (from PR '219-64').

**Hole dia.** To take M4 N&B.

**Hole pitch** Probably about ½", possibly 12.8mm,  
see Remarks below.

**Sets** Nos.1 & 2 known from a manual.

**Material/Finish** Model on manual cover has light blue, cream, orange-red, & green parts.

**Boss** As shown in the models; it is probably tapped M4.

**Fixing** M4 N&B. 8 & 12mm RH Bolts; hex Nuts.

**Axles** Normal Axles & Screwed Rods.

**DP** No Gears.

**Motors** None.

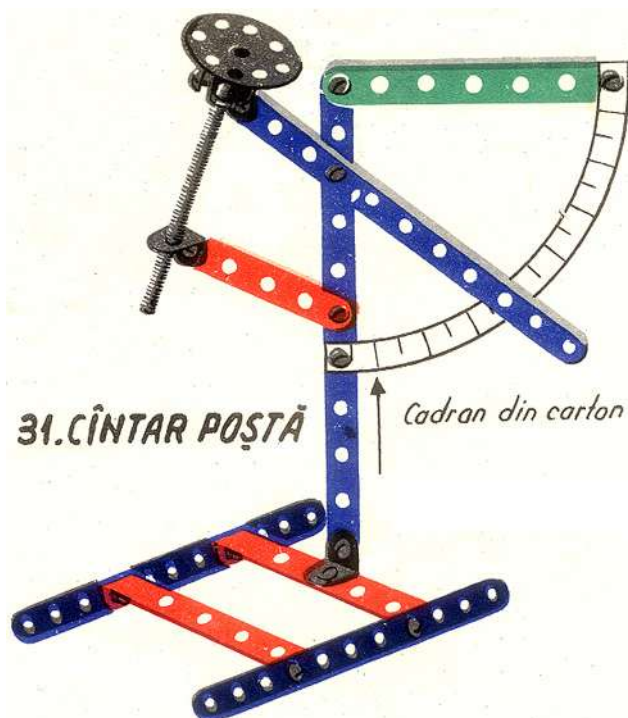
**Remarks** This system may be related to the PIONIERUL CONSTRUCTOR in MCS - its hole pitch is given as 12.8mm.

Sector Plate; Road Wheel. Yellow: 5 & 7h Strips. Red: 5\*11h Flanged Plate; 2h Strip; Curved Strip; DAS. Green: 78mm Pulley, 3h Strip. Bright A/B; small Pulleys; Bush Wheel.

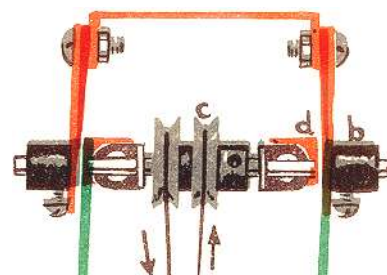
- The Curved Strip, Hook, & Bush Wheel can be seen in the top of the Crane jib right; and the Fast & Loose 2h Ø Pulleys, and the Collar, in the scrap view from a Cable Car below it.

All the models are shown in full, solid colour, with a large illustration of each, and a scrap view or a few words of explanation in one or two cases. For Set 1 the models go from 1. FURCA (Fork) on p1 to 40. MORISCA (Windmill) on p6, and for Set 2 from 41. SCARA PE ROTI (Wheeled Step Ladder) on p7 to 62. MOARA DE VINT (Windmill) on p13.

The models are a fair selection, and are not obvious copies from other systems. As well as those reproduced







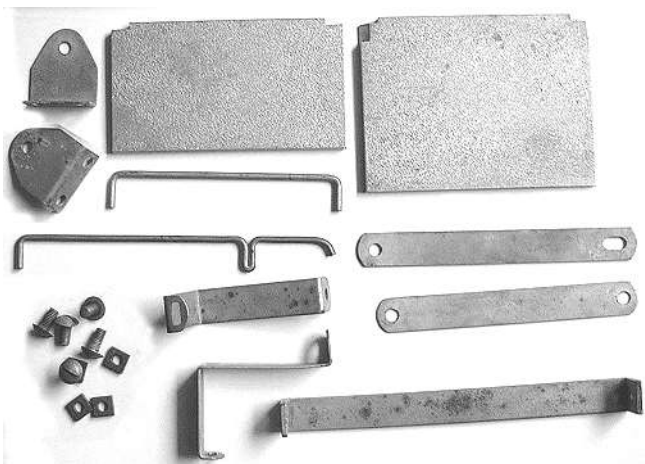
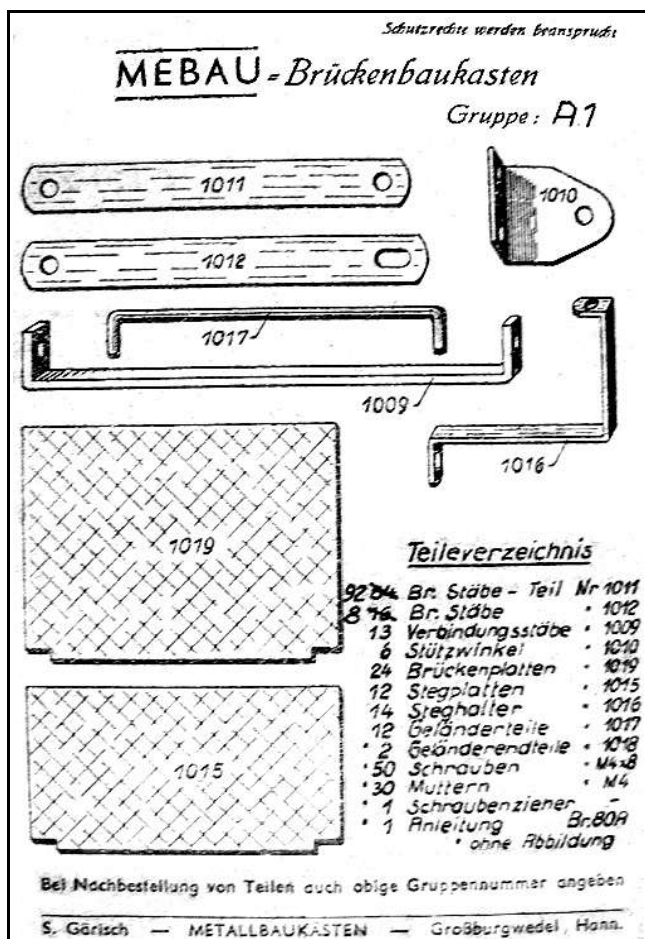
here (all at about 70% full-size) the better ones include a Cable Car, an Eccentric Press, & a 4-Car Big Wheel. The detailed design of the models is not all it might be in a few cases, witness the jib head above right and the No.1 Set Letter Balance left.



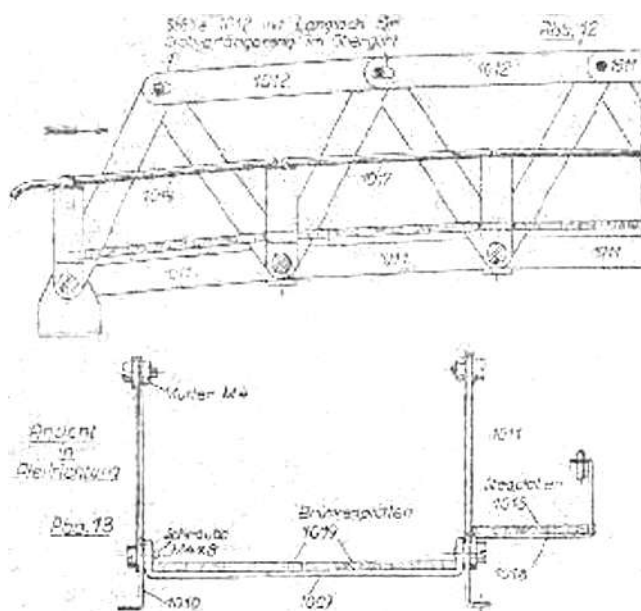
**More on MEBAU** A photo of an A1 MEBAU Bridge Building Set appeared in 28/819 and the account below is based on notes & photos that Jacques Pitrat has kindly sent about his set. Its manual was missing but Jacques included the (poor) Ebay photos of one from another A1 Set.

**The Set** was made in Germany, perhaps in the 1930s. The size of the box is 28.5\*24\*3cm, and it is identical to the one in OSN 28. The maker's name at the bottom of the lid is S. Gärisch, of Großburgwedel (a town near Hannover), and the words at the top, 'Schutzrechte werden beansprucht', are probably the equivalent of our 'All Rights Reserved'. A label inside the lid (below) illustrates most of the parts and lists the set contents.

**The Parts** There are only 11 types in all, and those not shown in the lid label can be seen in the photo of the actual parts under it. All are steel except the two decking parts. They are of an unknown, very heavy metal, certainly not

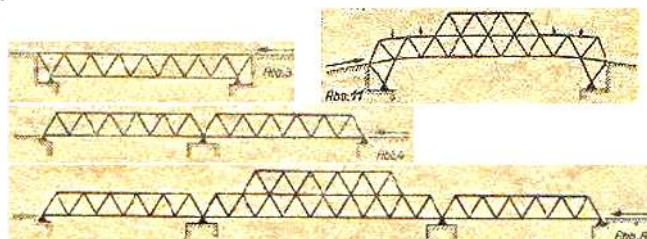


aluminium. Because of them, the box is surprisingly heavy, over 5kg. The basic use of the parts can be seen in the diagram from the manual top right.



- The **Strips**. #1011 has a total length of 90mm; it is 12mm wide & 1.5mm thick. The holes are 4mm diameter at 80mm pitch. The bridge sides are built up with these Strips. #1012 is slightly longer (96mm) to allow one end hole to be elongated outwards. In the top diagram above these Strips are used as the top members, presumably to allow the small degree of upward arching needed in 3 of the models. However for 2 of them there seem not to be sufficient for this purpose (even before the original 16 was reduced to 8). The part can though be used as the end side members to allow adjustment to any irregularities of the ground.
- #1009 (Verbindungsstäbe) is a **DAS** with just one tapped hole in each lug. It is used to join the bridge sides, and to support the main deck parts. It is 120mm long & 2mm thick.
- #1010 (Stützwinkel) is a **Trunnion** with two holes in the flange, at 16mm pitch, and one on the side. It is 28 mm high & 24mm wide. It is used as the feet of the Bridge, and the flange holes are not needed, unless to take screws to fasten the Bridge to a wooden base.
- #1019 (Brückenplatten) is a **Bridge Deck Plate**, 79\*59\*4mm in size. Two sit side by side on the DAS.
- #1015 (Stegplatten), **Path Deck Plate**, is similar to the preceding part, but it is used for a pedestrian path outside the main structure. The size is 79\*44\*4mm.
- #1016 (Steghalter) is a **Bent Strip** used to carry the Path Decking. It is bolted on as shown and the adjacent ends of 2 Railings push into a slotted hole at its outboard end.
- #1017 (Geländerteile) is a **Railing**. It is 2.3mm Ø rod bent at both ends, & is 79mm long. #1018 (Geländerendteile) is the **End Railing**, 107mm long. It can be seen in the photo.
- **N&B** They are steel, threaded M4. The Nuts are square; the Bolts are mushroom headed, & 8mm u/h.
- The **Screwdriver** was missing from the Set.

**The Manual** is a single sheet folded in two. There is a good deal of text, and 11 models, all variations of those



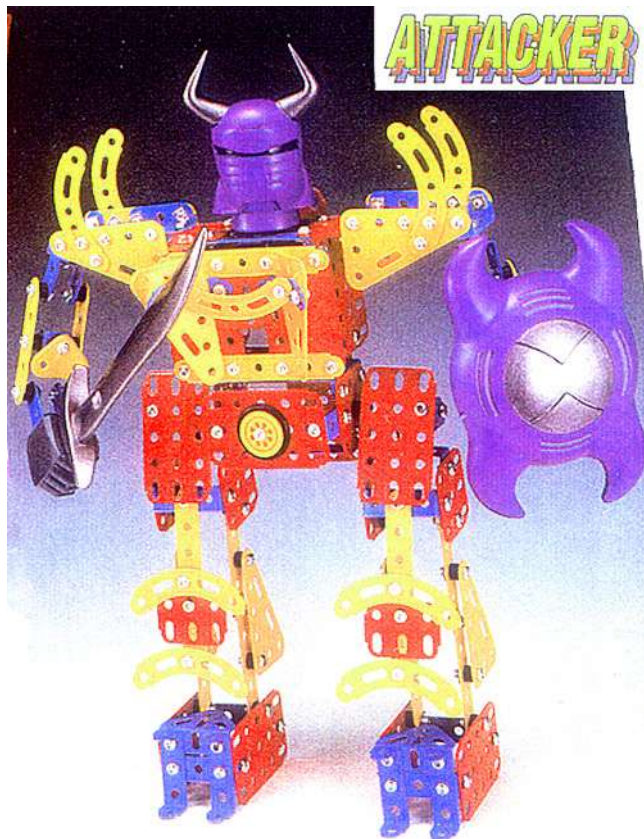
above. The 2-span one is nearly a metre long. The bottom 3-span model needs more parts than are in the Set.

**Other Sets** Their existence is indicated by the words at the bottom of the label - a reminder to quote the 'Gruppen+nummer', A1 in this case, when ordering more parts.



**The MEK-STRUCT Sets** The Artin range from the UK agent was listed in 19/529, and early in 2002 Josep Bernal kindly sent colour copies of what seems to be an Artin trade brochure. It is in English, carries no date, and the three addresses on it are of Artin in Hong Kong, the factory there, and Artin USA Inc. All the outfits listed in OSN 19 are shown, with one page for each category (but 2 for the General sets), and then a page with 10 small 'pocket' sets.

**MEK-BOTS** The sets are #3305, Defender; #3306, Protector; #3307 Attacker; and #3308, Destroyer. Each has 600 parts, and the Attacker is shown below. All the models are about the same size, and each has a different, outlandish body. The Destroyer's arms end with large 3-fingered plastic hands, all the others carry a shield in one hand and a weapon - a missile launcher, gun, & sword for 3305-7 respectively - in the other. Again all are plastic. Presumably the limbs are articulated to some degree but the models aren't motorised. The missile launcher looks like a high-tech bow & arrow and on one side of it is something that may be a trigger. That is the only obvious 'action' that can be seen in any of the models.



**MEK-TRAX** The sets are #3403 with 388 parts, and #3404 with 550. The two models shown for each are identical to those for the sets described in 16/443, even though the smaller one has a different PN.

**SPACE VEHICLE SETS** The sets are #3730 with 300 parts and #3756 with 560. Both have 'lights, sound, action'. The light is a red plastic dome on top of a black box with mounting lugs at each side with holes at 5\*2h pitch. The 'action' is no doubt the usual Geared Motor with forward/reverse Battery Box. The photo left is the lid of the larger set. 3 models are shown for each outfit and look to be made from standard parts with no plastic



'goodies'. The one to the right is the best of the 560 models; those for the 300 are simpler and even less attractive.

### EMERGENCY VEHICLE SETS

Again sets with 300 parts (#3630) and 560 (#3656), both motorised as per the Space outfits, and although not mentioned both sets have the Sound/Light Unit. The 300 outfit was described in 19/529 and some notes on the 560 were given in 14/392. In both cases the 3 manual models are as in this brochure.

**GENERAL SETS** There are actually 8 of these: 2 labelled 210 parts, 2 with 270, 2 with 370, & 2 with 450. One of each pair has 'Free Wheeling Construction Set' on the box lid, while the other has 'Motorized by Remote Controller', and contains the Geared Motor & Battery Box as before. The PNs for the non-motorised 210/270/370/450 sets are #3221/3227/3237/3245, and those for the motorised versions are #3621/3627/3637/3645.

One group of models is shown for each pair of sets, 4 for the 210; 5 for the 270, including 2 of the 210 models; 6 for the 370, including 2 from the 270; and 6 for the 450 including 3 from the 370. Presumably there are motorised & non-motorised versions of each. The models are the usual run of smallish vehicles, running on the fat, plastic, push-on Road Wheels, though some are rather better looking than the original MEK-STRUCT models, the 210 Car below for example. In all the models seen the Wheels are mounted on the gearbox output shaft. One of the 210/270 models, a Ski Runner, was shown in OSN 19. The 210/270 Biplane below, with its strange undercarriage, has no motorised version.



**POCKET BUILDERS** That's the name of a series of 10 small blister-pack sets containing 70 to 89 parts. They are probably the same as those listed in 15/426 though there is now one extra and the PNs, #32311-20, differ slightly (the 323903 in OSN 15 should be 32303). Apart from the Mini Buggy, the names aren't given in the brochure, but the model photos tie up with the OSN 15 names except perhaps the 32319 model above left. The 10<sup>th</sup> model, 32320, is to its right, but I know not what to call it. All the models except the Helicopter run on 1" Pulleys/Rubber Rings.



**More on MEC-BRAS** Edmundo Veiga has kindly sent several items of interest. First he now has 3 manuals like the No.5 described in 14/374, but for Sets 1, 3, & 6. All the covers are similar to the No.6 below. The models in these manuals, as in the No.5, are those for the appropriate 1954-61 MECCANO sets.



The next item is the manual below with No.9105 on the cover. It also includes models for Sets 9102 & 9103, and the Set Contents (on the facing page) cover these 3 sets & also the slightly larger No.9113. The range of parts is a little less than in the No.5 manual but the PNs & illustrations used are the same (see the MCS Extra Page X1.4).

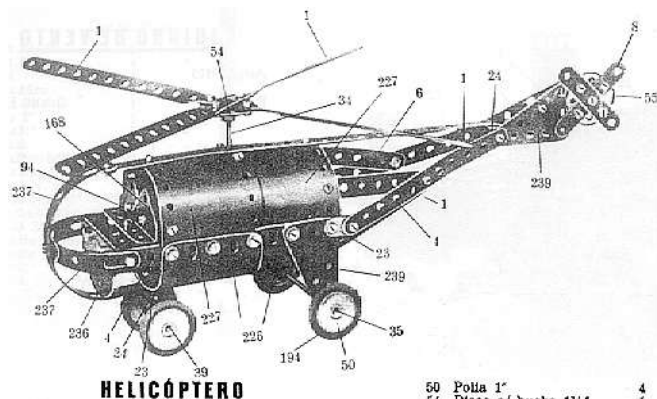


Comparing the MEC-BRAS 9102-9113 sets with the 1-6 series, the 9102, 9103, & 9105 are very similar to Nos.2, 3, & 5. 9113 has a few extra parts over the 9105 but the main difference is the addition of the 4.5v Motor, the Control Box for it, and the Bulb & Socket. The No.6 has none of these electrical parts (they were in the add-on Sets 10 & 11 of the time) but has some 15 parts that are not listed at all in the 9105 manual, including the 12½" A/G, #13; 19t Pinion, #60; 57t Gear, #65; 2½" Cylinder, #238; & the 2\*2½" Flexible Triangular Plate, #240.

So did the 1-6 outfits come after the 9102-9113 sets, or before them? The 9102-9113 sets include the 1½\*2½" Flexible Triangular Plate, #239, so that puts them at 1954 or after (assuming that Estrella did not introduce the part before Meccano). If the blue/red/yellow colours in the model on the manual cover are correct, that was a definite difference compared with the presumed red/green colour scheme in of the 1-6 sets. Edmundo has remarked that his

understanding is that MEC-BRAS was made under license from Liverpool.

The range of models in the manual is broadly similar to those for MECCANO in the postwar to 1960s period, but with fewer models, and none are exact copies. Some look better to me than their nearest MECCANO counterparts, and some worse. The Helicopter below, 60% full-size, is a fair example of the better ones. Each model has a list of the parts needed and brief building instructions.



#### Artigo 9105

Parte no.

Quant. Peças

|    |           |   |
|----|-----------|---|
| 1  | Tira 12½" | 4 |
| 4  | Tira 5½"  | 2 |
| 6  | Tira 3½"  | 2 |
| 8  | Tira 2½"  | 2 |
| 23 | Tala      | 4 |
| 24 | Canaleta  | 2 |
| 25 | Esquadro  | 3 |
| 34 | Eixo 4"   | 1 |
| 35 | Eixo 3½"  | 1 |
| 39 | Eixo 1½"  | 1 |

|     |                          |    |
|-----|--------------------------|----|
| 50  | Polia 1"                 | 4  |
| 54  | Disco c/ bucha 1½"       | 1  |
| 55  | Disco 1½"                | 1  |
| 82  | Porca                    | 50 |
| 83  | Parafuso 5/32"x7/32"     | 54 |
| 84  | Arruela                  | 12 |
| 94  | Canaleta 2½"x½"          | 1  |
| 100 | Base 5½"x 2½"            | 1  |
| 167 | União 2½"                | 1  |
| 168 | Suporte angular          | 2  |
| 194 | Argola de Borracha       | 4  |
| 226 | Placa flexível 4½"x2½"   | 2  |
| 227 | Placa flexível 5½"x2½"   | 2  |
| 236 | Meia lua                 | 2  |
| 237 | Arco 8"                  | 4  |
| 239 | Placa triangular 2½"x1½" | 4  |

O corpo é formado pelas placas flexíveis n.º 226 e 227. Estas, devem ser parafusadas a uma base 5½"x2½" (n.º 100).

**SUMMARY OF MANUAL** •Name: MEC-BRAS No.9105. •Details of maker: as for No.5 manual in 14/374. •Dates &/or Ref Nos: none. •Page size: 204\*206mm deep. •No. of pages: 20+covers. •Language: Portuguese. •Printing: B&W ½-tones of models. •Page No. of Illustrated Parts List & highest PN: C3,239. •Page No. of Set Contents & highest PN: C4,250. •Sets covered: 9102,9103,9105. •No. of models for each set: 16,8,8. •Name, Page No. of first & last model of each set (no Model Nos.): 9102: CARRIOLA,1; CAMINHÃO,8. 9103: MOTOCICLETA,9; CAMINHÃO,12; 9105: CAVALO MEC. C/ CARRETA,13; TANQUE DE GUERRA,20. •Other notes: details from a photocopy.

The MEC-BRAS 4-figure set numbers bring to mind the 4 MECANIC sets, 9100-9103, sold (made?) by the same firm, and known from 1956/7. Apart from the name, they, as shown in MCS, look like 1954-61 MECCANO outfits, and the Set Nos.0-3 can be seen on their box lids. Exact comparisons between the sets with common 4-figure numbers isn't possible but certainly the two 9102s differ in that the MECANIC set has a 2½" Road Wheel and the MEC-BRAS one doesn't. Both 9103s have two. The MEC-BRAS No.2 doesn't have one and the No.3 has one.

The final item is the outfit below, and to the right; it is





# CONTEÚDO DO MEC-BRAS

| N.º | DESCRIÇÃO DAS PARTES         | CONJUNTO |          |          |          | N.º | DESCRIÇÃO DAS PARTES             | CONJUNTO |          |          |          |
|-----|------------------------------|----------|----------|----------|----------|-----|----------------------------------|----------|----------|----------|----------|
|     |                              | N.º 9102 | N.º 9103 | N.º 9105 | N.º 9113 |     |                                  | N.º 9102 | N.º 9103 | N.º 9105 | N.º 9113 |
| 1   | Tira 12 1/2"                 | /        | /        | 4        | 4        | 104 | Base segmento                    | /        | /        | 2        | 2        |
| 4   | Tira 5 1/2"                  | 4        | 4        | 8        | 10       | 107 | Gancho                           | 1        | 1        | 1        | 1        |
| 6   | Tira 3 1/2"                  | /        | /        | 2        | 2        | 134 | Segmento 2 1/2"                  | 2        | 2        | 4        | 4        |
| 8   | Tira 2 1/2"                  | 4        | 6        | 9        | 9        | 158 | Parafuso 5/32" x 3/8"            | 4        | 4        | 6        | 6        |
| 23  | Tala                         | 4        | 4        | 5        | 7        | 167 | União Z 1/2"                     | 1        | 1        | 2        | 2        |
| 24  | Canaleta                     | /        | /        | 2        | 2        | 168 | Suporte angular                  | 2        | 2        | 2        | 4        |
| 25  | Esquadro                     | 8        | 8        | 10       | 20       | 169 | Suporte liso                     | 2        | 2        | 2        | 2        |
| 28  | Meio Esquadro 1/2" x 1 1/2"  | /        | /        | 4        | 4        | 182 | Pneu 1"                          | 4        | 4        | 4        | 4        |
| 34  | Eixo 4"                      | /        | /        | 2        | 2        | 194 | Argola de borracha               | 4        | 4        | 4        | 4        |
| 35  | Eixo 3 1/2"                  | 2        | 2        | 4        | 4        | 211 | Mola de torção                   | /        | 1        | 1        | 1        |
| 38  | Eixo 2"                      | 2        | 2        | 2        | 2        | 214 | Correia de Borracha 2 1/2"       | /        | 1        | 1        | 2        |
| 39  | Eixo 1 1/2"                  | /        | /        | 2        | 2        | 220 | Roda 2 1/2"                      | /        | 2        | 4        | 4        |
| 40  | Eixo 1"                      | /        | /        | 1        | 1        | 222 | Placa flexível 2 1/2" x 1 1/2"   | /        | /        | 2        | 5        |
| 41  | Polia com cubo 3"            | /        | /        | 2        | 2        | 223 | Placa flexível 5 1/2" x 1 1/2"   | /        | 2        | 2        | 2        |
| 43  | Manivela                     | 1        | 1        | 1        | 1        | 224 | Placa flexível 2 1/2" x 2 1/2"   | /        | 2        | 4        | 5        |
| 50  | Polia 1"                     | 4        | 4        | 5        | 6        | 226 | Placa flexível 4 1/2" x 2 1/2"   | /        | 1        | 2        | 2        |
| 52  | Roldana 1/2"                 | /        | /        | 1        | 1        | 227 | Placa flexível 5 1/2" x 2 1/2"   | /        | /        | 2        | 2        |
| 54  | Disco com bucha 1 3/8"       | 1        | 1        | 1        | 2        | 230 | Dobradiça 4 1/2" x 2 1/2"        | /        | /        | 1        | 1        |
| 55  | Disco 1 3/8"                 | /        | /        | 2        | 2        | 231 | Placa U 2 1/2" x 2 1/2"          | /        | 1        | 2        | 2        |
| 76  | Chave de boca                | 2        | 2        | 2        | 2        | 232 | Placa abaulada 2 1/2" x 2 1/2"   | /        | 2        | 2        | 2        |
| 78  | Presilha                     | 4        | 4        | 8        | 8        | 233 | Terminal                         | /        | 1        | 1        | 2        |
| 79  | Chave de fenda               | 1        | 1        | 1        | 1        | 234 | Suporte movel                    | /        | /        | 2        | 2        |
| 82  | Porca                        | 44       | 54       | 100      | 110      | 235 | Luva                             | /        | /        | 1        | 1        |
| 83  | Parafuso 5/32" x 7/32"       | 40       | 50       | 94       | 104      | 236 | Meia lua                         | /        | /        | 2        | 2        |
| 84  | Arruela                      | 6        | 8        | 14       | 14       | 237 | Arco 3"                          | /        | /        | 4        | 4        |
| 85  | Arruela 3/4"                 | /        | /        | 2        | 2        | 239 | Placa triangular 2 1/2" x 1 1/2" | /        | /        | 4        | 4        |
| 86  | Barbante                     | 1        | 1        | 1        | 1        | 245 | Fio Flexível (mtrs.)             | /        | /        | /        | 2        |
| 88  | Suporte especial             | /        | /        | 1        | 1        | 246 | Lampada c/ Soquete               | /        | /        | /        | 1        |
| 93  | Canaleta 1 1/2" x 1/2"       | /        | /        | 1        | 1        | 247 | Conetor                          | /        | /        | /        | 2        |
| 94  | Canaleta 2 1/2" x 1/2"       | 2        | 2        | 6        | 8        | 248 | Casa de comando                  | /        | /        | /        | 1        |
| 99  | Base pequena 2 1/2" x 1 1/2" | /        | /        | 1        | 1        | 249 | Motor                            | /        | /        | /        | 1        |
| 100 | Base 5 1/2" x 2 1/2"         | 1        | 1        | 1        | 2        | 250 | Pilha 1,5 V                      | /        | /        | /        | 3        |

a Set No.81680 and belongs to Edmundo's friend Carlos Granja. The Crane on the lid and the Trike on the manual are both in the 9105 manual, for sets 9102 & 9105 respectively. It is thought that the Set was probably the largest of the day, and the parts that can be seen, and the Crane, point to it being similar to the No.9105 or the No.5.

Nothing is known of the date of the set but its 5-figure number might place it after the 9102-13 series. In passing the parts described in OSN 14 look exactly like those in the 81680 outfit.



The **date order** of the various MEC-BRAS phases remains unclear, in particular whether or not the 1-6 sets preceded the 9102-13 series. Some of the unknowns are the box lids and packaging in both periods; whether a blue, red, & yellow colour scheme ever existed; and when did the Meccano relation-ship start & finish. Also where did the MECANIC outfits fit in? - with some of their 4-figure item numbers common to MEC-BRAS sets, both ranges they can hardly have been concurrent.



**A CONSTRUÇÕES MECANICAS Manual** Edmundo Veiga also kindly sent a photocopy of the 'No.1 e 2' manual, which was with the Brazilian set shown in 27/806. Apart from the cover below, its pages are a more or less straight copy from a 1930s MÄRKLIN edition. I haven't of course seen such a manual in Portuguese but compared with a 1939 German manual the models, Model Nos., Set Contents, and the Illustrated Parts are virtually the same, except that the name at the top of each page has been changed. The whole MÄRKLIN range is given in the Set Contents & Illustrated Parts even though only Sets 00-2 were produced.



3 pages are probably new, the Intro, a page giving details of CON MEC Sets 00-2 (with exaggerated claims for the models for each set – 750 for the No.2 against (a gener-

ous) 290 for Sets 00-2 actually in the manual), and a page listing linking sets 00A-5A but with no maker specified. Perhaps Irmãos Piacentini were looking towards expanding their range.

Small differences compared with the 1939 MÄRKLIN manual are as follows. **Models** - there are 3 less for Set No.1, including, curiously enough, the Gantry Crane on the front cover. The name 'MÄRKLIN' on one model has been blotted out. **Illustrated Parts** – a picture of a CON MEC manual replaces the MÄRKLIN one and 2 manuals are listed, #70 for Sets 00-0 & #70a for Sets 1-2. The present 'No.1 e 2' manual has No.71A on the cover and, despite the '1 e 2' includes 00-2 models. The 'Transport' parts (see 5/99 or p7e of MÄRKLIN (A) in MCS), dropped from German manuals in the late 1930s, are included. **Basic Constructions** – all the pages have been included except those for Groups B, F, & G (rigid structures & gearing).

**SUMMARY OF MANUAL** •Name: CONSTRUÇÕES MECANICAS No.1 e 2. •Details of maker: Irmãos Piacentini, Rua Indaiá, 163 (Vila Prudente) São Paulo, Brasil. •Dates &/or Ref Nos: none. •Page size: 250\*172mm deep. •No. of pages: 96+covers. •Language: Portuguese. •Printing: shaded drawings of models. •Page Nos. of Illustrated Parts List & highest PN: 4-9,211c. •Page Nos. of Set Contents & highest PN: 10-11,153a. •Sets covered: 00,0,1,2. •No. of models for each set: 36,94,107,53. •Name, Model No., Page No. of first & last model of each set: 00: Carro simples,1,13; Guindaste, 36,17. 0: Vagão aberto para mercadorias,101,18; Vagonete elétrico, 194,32. 1:Vagonete,301,33; Trator com reboque,407,63. 2: Escada sobre plataforma com rodas,501,64; Prensa de duas colunas com transmissão á engrenagem,553,93. •Other notes: details from photocopy. Basic Constructions A,C-E are on pp12,94-6. C2-4 are blank.

OSN 29/876

## CONSTRUÇÕES MECANICAS: S1

**A KITSPOCK Set** Finally from Edmundo, photos of a friend's No.4 Set. This is one of the 'New Kitspock' series of sets mentioned in 14/375, and included there is a B&W picture of the same Set, taken from an advertising leaflet. It shows a hinged rather than the sliding lid below, and the

on one side & yellow on the reverse.

- A Semi-circular Plate (in the Flanged Plate) with the 4 extra peripheral holes.
- A yellow 2½" Gear Wheel.
- A pair of silvery 14t Multi-Purpose Gears.



latter has a transparent panel in it, though I'm not sure whether or not it is original. The wording is in Portuguese, English, & Spanish – 335 Parts / Steel Construction Set / With Motor / Batteries Not Included / ? 88 ? (models I expect) / Made in Brazil.

The parts that can be seen in the open box (above, right) are listed below, with notes that add to those in OSN 14.

- A flat Spanner, with no centre hole.
- A 5\*11h Flanged Plate with all its sides flanged.
- The 3\*5h Triangular Plates, blue & yellow – probably blue

- 2 Pinions (above the Spanner).
- A black push-on Road Wheel.
- The red M0-type Motor (its red Battery Box can be seen in one of the models on the lid, and in the panel to its right, with the Motor as well).
- Some bright small parts including a flat-topped Trunnion (close to the left side of the Motor), Brackets, DAS, a Curved Strip, & a Formed Strip. No doubt all these bright parts are BZP.

OSN 29/876

## KITSPOCK: S1