THE NEW ERECTOR? Tales abound of the relationship between ERECTOR and MECCANO in the United States, of how A.C.Gilbert was the first MECCANO agent there prior to his launching ERECTOR in 1913, of the lawsuits over patents, and finally of how Gilbert got control of the MECCANO name in the USA in 1928, before apparently Liverpool got wind of what was afoot. ERECTOR flourished in the 1930's using the MECCANO name in parallel with ERECTOR for a few years but then only for a range of lesser products. From the 1950's on though ERECTOR lost sales and recently it disappeared completely from the marketplace, having changed hands several times, and with the last sets being little more than plastic kits. But the name ERECTOR has entered the language in the USA just as MECCANO has in the UK, and now, according to a news item in the latest Infos magazine from Jean Estève Objets in Paris, to take advantage of this there is to be another twist to the story - ERECTOR is to live once more, Calais having agreed with Tyco Toys Inc, the current owners of the ERECTOR name, that it will be marketed again but the parts inside the boxes will be MECCANO parts. The report says that there will be immediate access to 55% of the American toy market through four of the major toy distributors, and that if expectations are realised it may be advantageous to make parts in Mexico. Well long live ERECTOR and vive MECCANO but why will the new concept succeed any better than GABRIEL ERECTOR did in the 1960's and 70's.Initially they had quite a good range of recently designed parts (for children that is, not the adult enthusiast), reasonably designed manual models, easy availability of extra parts by mail order, good power units, and slowly but surely they died commercially. But if you never try you never succeed so full marks to Calais (or Tyco) for some splendid lateral thinking.

ARCHITECTURAL CONSTRUCTION SETS Malcolm Hanson recently held an exhibition at the Gloucester Folk Museum based on his extensive collection of this type of material and he produced a spiral bound loose-leaf book called BUILDING TOYS for visitors to buy. He has recently reprinted it and copies can be obtained by writing to Malcolm at 11 Willow Close, Long Ashton, Bristol BS18 9DT. England, Tel 0272 392321; it costs £2.50 including postage. The contents on 32 pages, A4 size, introduce, in seperate sections, sets with wooden, stone, card, metal, rubber and plastic components. There are many illustrations and I found it all most interesting, even though architectural sets are not one of my primary interests.

NEW FACTS - STOKYS In the STOKYS manual for Set 4 there is a Steam Roller with an elegant, tapered chimney but no indication of how it is to be made. In a Parts List for 1950 (No 10) sent by Harry Mariën, said Chimney is shown as a STOKYS part, as shown below - it was made of wood. It does not appear in the next Parts List available, No 32 of March 1973, and there are a few other deletions, for example, Rubber Rings for the 20mm and 35mm Pulleys. Quite a few parts had been added and full details will be given in a later account. One major change though is that in 1950 there were two Clockwork Motors, the current F1 (single speed, reversing) and an F2 with two speeds and reversing. It is not illustrated. In 1973 the F2 is not listed but there is an F0 which looks identical to the F1 but without the reverse lever. In the next list to hand (No 38, September 1979) the F1 alone is shown.

108 Kamin (Holz)
Cheminée en bois . . . . . .


108

FINDING the DIAMETRAL PITCH or MODULE of GEARS The Diametral Pitch (DP) of a gear is a measure of its tooth size, the larger the DP the smaller the tooth. It is defined as the Number of teeth/Pitch circle diameter (pcd) in inches. It is not easy to measure the pcd and one alternative, empirical formula which seems to work quite well for most purposes is (No of teeth + 2)/Outside diameter. As an example the O/D of a MECCANO 57 tooth gear that I have just measured is 1.553" so the DP=(57+2)/1.553= 38.0. With this size gear extreme accuracy in measuring the diameter is not essential, if for example it had been found to be 1.54" the DP would be 38.3, which is good enough for most OS requirements.

Module (mod) is the metric reciprocal of DP, so the Mod is pcd(mm)/No of teeth; or if the DP is known, Mod=25.4/DP, so for the 57 tooth gear the Module=25.4/38=0.67.

SMALL AD TRIX parts for sale, over 1500 plus 800 bolts and 200 nuts, weighs some 15kg. Includes 160 angle girders, 60 gears, 10ft chain, 50 tyres, 2xE electrical parts, 6 motors. Well over half the parts are rust free, cleaning the rest would destroy all/part of original finish. £150 plus carriage, or would split if no-one wants it all - Editor OSN.

of the Concise Oxford dictionary (copy enclosed); it is the British Standard form. There are two other recognized systems, a UNESCO standard which differs chiefly in using š and č instead of sh and ch; and a (U.S.) Library of Congress standard which uses i͡a and i͡u instead of ya and yu. Both the British and American systems indicate the "soft" vowel mark (a Cyrillic letter which is not separately pronounced) by a ' and the "hard vowel" mark by ". Sorry, there can be no justification for "approximating" the shape of Cyrillic letters by roman letters that look something like them. The problem is compounded, too, by the fact that there are "lower-case" cyrillic letters---actually, script forms--not used in ordinary cyrillic text printing but used for display headings---which look like roman characters but differ from both the "upper-case" or ordinary cyrillic characters and the roman in what they stand for. Thus M in cyrillic means m (roman), but "m" (cyrillic script) means t! Thus, note in MCS, KONSTRUKTOR, where the lettering on the manual cover is "koHcmpykmop". It serves no useful purpose, provided an illustration of the original cyrillic is given in whatever is reproduced, to give an "approximation" in roman characters. The correct transliteration is just as easy to give, and must be used in arranging foreign names in an index, etc. A translation given in () is useful to explain the foreign name or text, and can be used as cross-reference to the foreign name; but a system should not be listed under either the translation or an "approximation" as an entry heading.

The suffix s as in "konstruktors" is a characteristic nominative ending in Latvian (Lettish), and also in plural, in various grammatical cases. The -s ending does not appear to be characteristic of Russian at all. I suspect Andreas Konkoly has given a Russian version of the bilingual sets he has advertised--remember he is Hungarian, hence writing "Konstruktor" rather than the Lettish "Konstruktors".* In no case would the final -s imply "something that needs to be constructed"; in Russian such an ending would perhaps be more likely -tsia. To repeat, "ONbITOB" in MCS is meaningless, and is not the name of the system. Please go back and re-read what I have previously written. I do not pretend to read Russian but I studied Russian for a couple of years 25 years ago, and have used it from time to time for many years.

You're quite right. The name of the new system shown in OSN 3 appears to be VINTIK I SHPUNTIK, not "shluntik". I had to go to the university library for a Russian tehcnical dictionary. It translates roughly as "little screws and slots"--"shpuntik" being a groove, rabbet, or particularly a keyway. Sorry about my first misreading, but those rather blobby cyrillic letters were not very clear. "I" in Russian means of course "and".

Which leads me to an item in a letter from Keith Cameron the other day, saying he sent you the ELEKTRISKAIS KONSTRUKTORS manual and noting that the box had on it "21 Meginajums". The same word is on the ELEKTROMEHANISKAIS KONSTRUKTORS manual: "45 Méginájumi/Opitov" and we've established that "Opitov" means "experiments" so "21 Meginajums" (Meginajumi??) must similarly mean "21 experiments"--or models?

I have not been able to find any other verification of Keith Cameron's statement that CONSTRUCTO was sold in Canada by Radio Shack (p.38). Norman LaCroix verifies that it was marketed in Canada by Science Master Toys, the boxes bearing the name "Paramount Industries". The contents of the V-8 set I bought were quite as they should have been, not wildly erratic. I may have been lucky.

I see WISDOM/SAGESSE on the shelves of Kingston toyshops this season, a No.4 Wisdom being about $25 compared to a No.4 Meccano at something over $100. !! They are not exactly comparable, of cours,e but one can perceive customer reaction to the relative prices. No BRAL here, only seen in Ottawa and Toronto at one chain of toyshops.

There is a series of monthly "Erector Notes" in an American toy collectors' magazine called Yesterdaze Toys, Box 57, Otisville, Michigan 48463, USA.

[Cont >]

*Remember that Latvia has been part of the USSR since 1940; hence anything from Latvia would quite correctly be said to be Soviet in origin.

QUERIES.

1. In OSN 2 and 3 it was stated that the thread of British TRIX is 4BA and certainly all the threaded parts commonly found have this thread; however Peter Page has some TRIX which he is 99% sure is prewar British, and the thread is much coarser than 4BA, he thinks it is probably the 3.5x.8mm referred to in OSN 2, p17. In the next Issue will be some information on old Belgian threads sent by Gaston Marette, and this includes one with a diameter of 3.5mm and 32tpi. The equivalent pitch is .794mm so if the Belgian standard was the same as that used in other continental countries it is just possible that the TRIX thread is the bastard 3.5mmx32tpi.

11. Thanks to a number of readers who wrote explaining what VEB means (OSN 6, p113). Geoff Davison's letter arrived first saying 'VEB stands for Volkseigener Betrieb, which means a business belonging to the people. It was used in the former DDR (GDR) for what we would call nationalised industries; as the Treuhandanstalt gradually privatises these firms, the use of the term will of course gradually die out.'

12. Several readers were also good enough to send the info on PRIMUS prices requested in the last issue, p113. Enough is to hand to allow one or two tentative conclusions to be drawn, it is hoped in OSN 8. but if anything new turns up please send it along.

13. Back to TRIX, Geoff Wright and others have asked if anyone knows how TRIX hole spacing came to be what it is. Although variations do occur, typically the spacing along strips is between 7.810mm and 7.815, giving a diagonal spacing of around 11.05mm. Converting these figures to inches doesn't improve their roundness. One number is no doubt as good as any other, but few if any OS venture beyond one decimal place in their nominal spacing, unless of course straightforward fractions of an inch are used. So why 7.81? for TRIX?

14. Has anyone come across ALCON as an OS name? I thought I had but I now can't find it in the MCS Index or anywhere else. I was looking for it because I came across an advert for it in the MM of 12/49; one set was on sale at 7/9 'containing over 1000 pieces', and there is an illustration of a skeletal 'Suspension Bridge, 2ft.4in. long'. ALCON conjures up 'aluminium' and 'construction' in my mind but there is no mention in the ad of the material used or how the different elements were joined together. A thousand parts for 7/9 sounds like good value when a No 1 Dinky Builder set, advertised in the same MM, was 10/6. So maybe the parts were wooden or even plastic, perhaps glued together. There were two further mentions of ALCON in MM, in Gamages' ads in 1951, where it was said to be 'Based on an entirely original idea with only seven basic components.'

STOKYS PARTS, 1989. The last Illustrated Parts List I had was No 40 from 1981 but last December Harry Mariën sent me one, not numbered, dated 1989, and I understand that when it was sent, it was still current. There is no List of Parts in MCS (p3), just an illustration of some of them, so I'll compare the new List with the No 40. Quite apart from a few parts being deleted and a fair number added, there have been two major changes since 1981, the PNs have been changed and the screw thread, which was 5/32"BSW, is now M4. The new PNs start with a letter which is sometimes the initial letter of the part in question, for example Z for Zahnrad (gear, everything is in German), followed by a two figure number; fortunately both the old and new numbers are given.

To avoid confusion between parts with the old and parts with the new thread, it is stated that bosses tapped M4 are silver colour and those with BSW are yellow (brass I suppose); also that metric Bolts are black and the 5/32" ones are yellow. Nuts are not mentioned but in the List both the M4 and 5/32" variety are included, but only M4 Bolts. Most of the other threaded parts are noted as M4 but in two cases (Threaded Pins) versions with both threads are shown, and sometimes eg the Coupling, no thread is mentioned.

Deletions since 1981 are the transparent version of the Plastic Flexible Plate; the separate parts of the Universal Coupling; the large diameter 3-hole Collar; the Buffer; the Potter's Wheel and Clay; the Meccanograph (if STOKYS will forgive the word) Table and Paper for it; and the two special Brackets, #646 and 648. The deleted parts that are not illustrated in MCS are shown below.

There are over 50 additions and in outline these are:

- 78-hole versions of the standard, Z, and U section A/G.
- 6 extra lengths of the 4-hole wide Perforated Plate, up to 78-hole long.
- 6 lengths of 5-hole wide Perforated Plate from 7 to 78-hole.
- Flat Girders (like MECCANO not 2-hole wide Strips) in 19 lengths from 1 to 78-hole.
- A Wheel with wide Tyre, 47mm dia o/a; and 6 Wheels with large tyres (Ballonräder), diameters from 50 to 120mm.
- Misc items - a 22-hole Rack; what looks like a Geared Roller/Ball Bearing, 115mm dia; different lengths of Screwed Rod and Bands; bulb holders and a range of coloured bulbs. holders.

The 1989 List is for parts only and contains no details of the sets amd manuals that were in earlier editions; motors are listed and are the same as in 1981, but with different numbers.

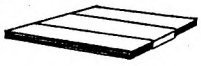
While writing about STOKYS it is worth correcting the MCS entry for PERIOD. In the North Midlands Newsmag No 24 Felix Stockmann, then head of STOKYS, wrote a short note on the origins of the firm: it seems that his father and uncle were silversmiths and in 1942 they founded STOKYS because during the war their trade was slack, and MECCANO was not available. In Newsmag No 26 (Dec 1981) he is quoted as saying, "Due to disagreements within the management of the family business the firm is to be sold as a going concern to a middle-sized steel and fuel trading company of Lucerne which wants to diversify its business. Production will remain in Lucerne. The effective take-over and official announcement will take place in January 1982."

EXTRA PAGES FOR MCS: STOKYS: X1.3,3a,3b. (2 Sheets)

AMENDMENTS TO MCS (as necessary, depending on version)
PERIOD: Replace by: 1942 to current (1992).
MANUFACTURER: Gebr. Stockmann Brothers AG, Maihofstrasse 36, 6004 Luzern, Switzerland. In 1981 the name of the company on a Price List was STOKYS EIKO AG, at the same address. In 1989 after the firm had changed hands a Price list showed STOKYS, CH-6014 Littau-Luzern.

AMENDMENTS TO INDEX IN OSN 6
THREAD: Add: later M4.


210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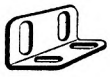
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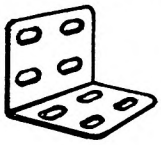
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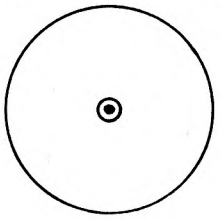

215

210 Zeichentisch, Holz, 15×15 cm
Table de dessin en bois, 15×15 cm

211 100 Blatt Zeichenpapier, 15×15 cm
100 feuilles de papier à dessin, 15×15 cm

646 Verbindungswinkel, doppelt
Equerre de raccordement, double

648 Verbindungswinkel 4×4-Loch
Equerre de raccordement 4×4 trous

215 Töpferscheibe, ⌀ 90 mm, mit Nabe
Tour de potier, ⌀ 90 mm, avec moyeu

216 1 kg Modellierlehm (mit Wasser bearbeiten)
1 kg d'argile (façonner avec de l'eau)

HOBBIES STRIPWORK. Geoff Wright pointed out the ad below (rearranged to fit and enlarged in part), in a HOBBIES magazine dated Dec 18, 1926. You may be able to see that the manual has STRIPWORK on it but what looks as if it is the box lid has STRIP WOOD-WORK. As it says in the text the wooden strips are nailed together so I don't think this outfit counts as an OS, but the gears and other metal parts on the board at the front are clearly very similar, if not identical, to the KLIPIT parts on p3/4/5 of MCS. So was STRIPWORK sold at the same time as KLIPIT? Or could it be that HOBBIES launched STRIPWORK and then finding that the young were better at nailing the strips to the furniture than to other strips, hastily invented the metal clips that hold the strips in KLIPIT together.

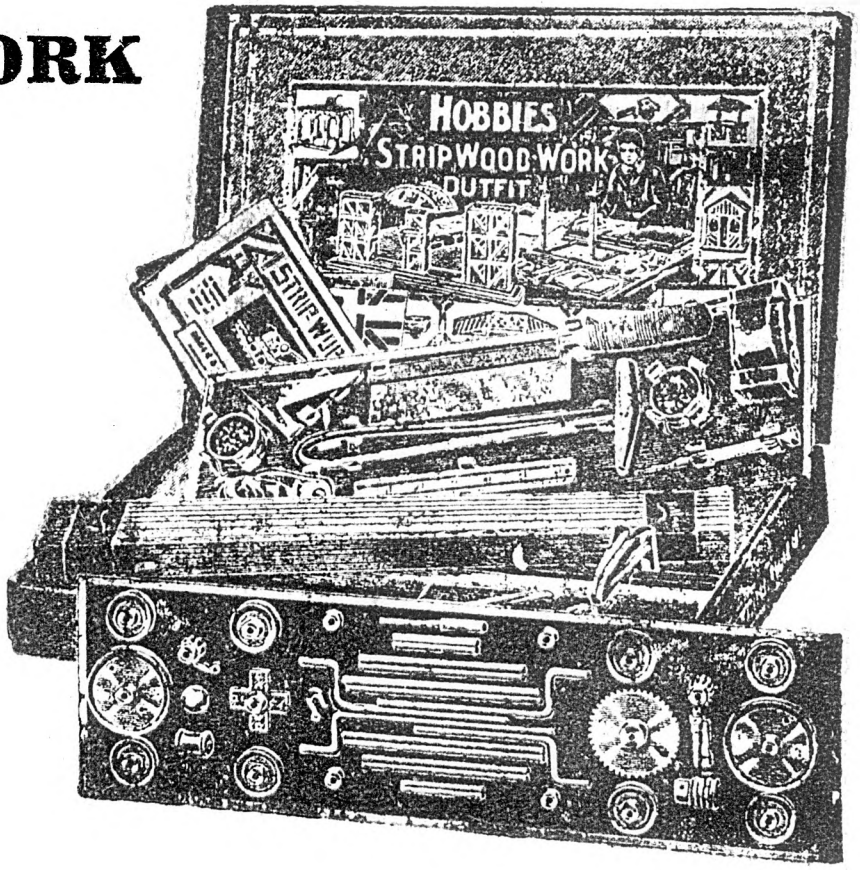
STRIPWORK

helps the young idea the laws of engineering and construction.

A Stripwork Outnt is worth half-a-dozen books. With it a boy or girl can build all sorts of models of everyday subjects from designs supplied. They are built correctly in wood and securely nailed and fixed, so that not only is the use of tools taught, but a definite scheme of planning and correct construction.

HOBBIES, Ltd.
DEREHAM, NORFOLK

Outfits from 12/6 to 35/-
Each with instructions & illustrated handbook



STOKYS AUTO SETS. From Harry Mariën some photos of two new STOKYS Auto Sets, the #1 and 1a, and the number in the top right hand corner of the 1a box lid shown below, 1·1a·2, seems to indicate that there is a #2 Set as well. Just when these Sets were introduced is not certain but they are currently available.

The #1 box contains two trays; all the parts seem to be standard STOKYS but their range indicates that the models cover a wide span of vehicles. There is for example a Hook, and one of those Winch Brackets, A41, and 2 of the Flanged Discs K01, which with 4mm Balls between them make a ball bearing. So the makings of a crane and in fact a model of a Mobile Crane is shown in the background of what looks as if it is the cover of the manual in another photo. Also visible are 4 50mm Flanged Wheels, R23, and 2 of the smaller R22, so a loco? Two 1½"ish diameter Gear Wheels can be seen but there are no signs of their purpose. And no signs of a Driver, with STOKYS on his helmet, as shown in the cockpit of the Racing Car. The Wheels in the set look as if they are red R06 35mm Pulleys fitted with Tyres, but whether with the standard R08 Tyres can't be seen. There are 6 of them.

The #1a box again has 2 trays and they look to be the same size and to have the same inner partitions as those of the #1. And again 6 Wheels but both the Hubs and the Tyres look different to those in the #1, (below, right); they look like those used on the Racing Car shown on the lid. The hubs have 6 holes around the boss and what may be a wide rim to take a wide tyre; the diameter of which looks if anything slightly smaller than the one in the #1 Set. They're perhaps #R62 (Wheel complete with Tyre), one of the new STOKYS parts mentioned in OSN 7, it's 47mm in diameter. Various gears can be seen including Contrates and a Worm, and there are 4 Couplings and 3 Cranks, and one of the H05 3-Spoked Wheels that could be used as a steering wheel. So some mechanical detail can be expected in the models. There is nothing to suggest that any of them are motorised, and indeed the current STOKYS sideplate type motors would hardly be suitable for use in relatively small models.

Harry also sent photos of a current STOKYS #4 Set and as far as can be seen the contents remain the same as they were; the covers of the manuals, 0-2 and 3-4, are almost unchanged from early 1970s ones - the model of the Excavator with the green roof is the same but the 30mm band along the bottom has changed from blue to yellow.

Above: the label on the box in the set for small parts.

STAHLBAU TECHNIK. Courtesy of Geoff Wright I have recently been able to examine two No.1 Sets and some amplification of the data in MCS is possible. The sets are very similar to one another but with some minor differences such as the colour of the box and the reference numbers on the lids. The latter contain elements that could be dates with EVP 7,55 on both, and Pn 598/73 on one and Pn 13/1972 on the other. There are no other positive indications of age although the parts are packed in a plastic tray with moulded recesses for the various parts, and the handle of the Screwdriver is also made of plastic. Neither set had a manual and neither was complete, and both contained some parts which from the Contents given in MCS should not have been in a Set 1.

The spacing of the holes is 12.5mm and the Strips are 12mm wide with the ends near fully radiused. All the Strips, DAS and Brackets are nickel plated. Except for one 5x3h Plate (#12) which is also nickelled, all the Plates, Flat Girders and Girder Brackets (#23) have a 'crackle' finish, some in light grey and others in pale green. Some of these parts do not look exactly as illustrated in MCS - #13 and 14 are fully perforated, #23 has 2 rows of holes in the wider flange, and the elongated holes shown in #15 and 25 are replaced by large circular holes of 5.7mm diameter.

#27, 30 and 31 are painted a bright redish orange, including the 11.2mm dia, double-tapped bosses. The illustration of #27 in MCS is not very clear, it is a MÄRKLIN type Flanged Wheel but with 12 holes in its face, 2 on each of 6 equispaced radii, at 12.5 and 25mm from the centre. #31 is 22mm dia and not the 26 shown in MCS.

The Axles have a black metallic finish with square ends; all those in the Sets, 55, 80 and 110mm long, are solid and not what look like the hollow rivet type shown in MCS. Two different Tyres were in the Sets, #28/2 in one and #28/3 in the other; the latter would not fit into the appropriate space in the box so they may not have been from the original set. Both types have some letters/figures moulded into one face but they are difficult to read. Possibly HPS, with opposite on one, 10x45x20, and different combinations of numbers on others.

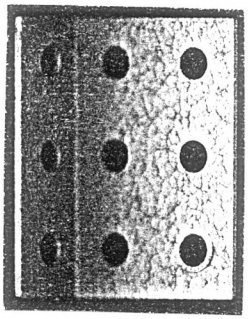
Other points: • The Hook is flat and is painted black. • The Screwdriver has a red plastic handle with 0.6 VOLTUS and Made in GDR moulded into it. • The thread used is M4. The Nuts and Bolts are bare steel except that some of the Nuts have a black metallic finish. There were 3 sizes of Bolts, all cheesehead: 6, 8 and 15mm u/h. • There were no gears in the Sets of course but from the hole spacing and the number of teeth given in MCS, the Module is 1.25 thus a DP of about 20.

Apart from the orange parts, the colours given above differ from those shown in a Manual similar to that on which the MCS entry is based; details of the manual colours are given in the MCS Amendments below. This Manual also gives the name and address of the Manufacturer, which as noted below is the same as METALLBAUTECHNIK.

Some of the parts which differ from those in MCS, or are unclear there, are shown below; also the label on the lid x½.

AMENDMENTS TO MCS (as necessary, depending on version)
HOLE DIAMETER: 4.2mm. HOLE SPACING: 12.5mm. COLOUR: Nickel plated Strips and Brackets, Orange circular parts, Plates have light grey or pale green crackle finish. The colours shown in a Manual differ with the Strips etc black, and the Plates green and blue. MANUFACTURER: THALER BLECHWARENFABRIK KRAUSE & CO, THALE/HARZ. (East) Germany.
COMMENTS: Replace by: Krause & Co. also made METALLBAUKASTEN.

AMENDMENTS TO INDEX IN OSN 6
THREAD: M4. SPCE: 12.5. dST: 4.2. DAXL: 3.96.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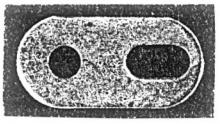
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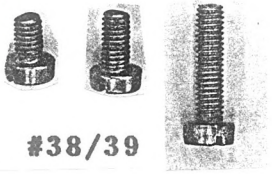
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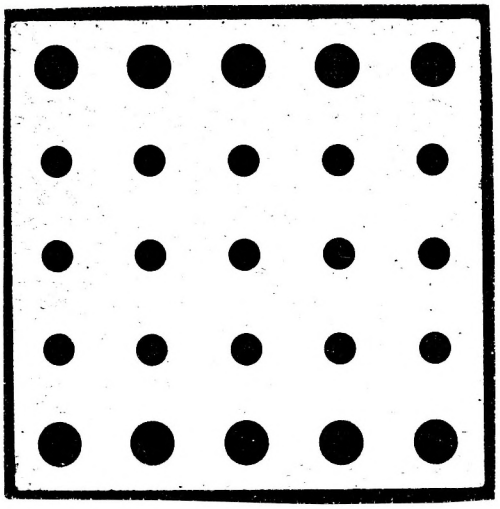
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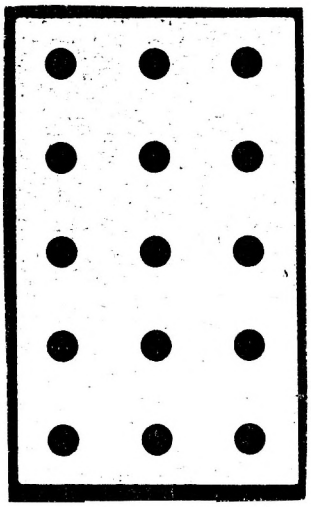
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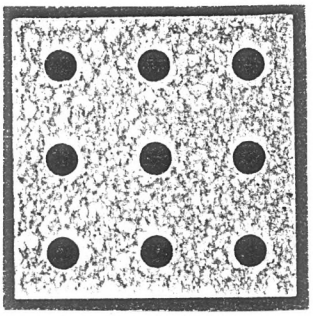
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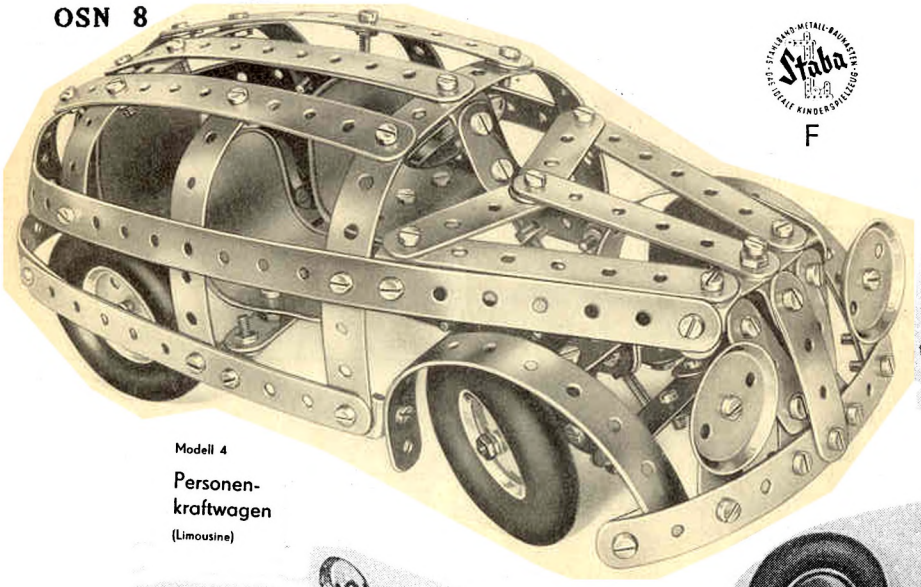
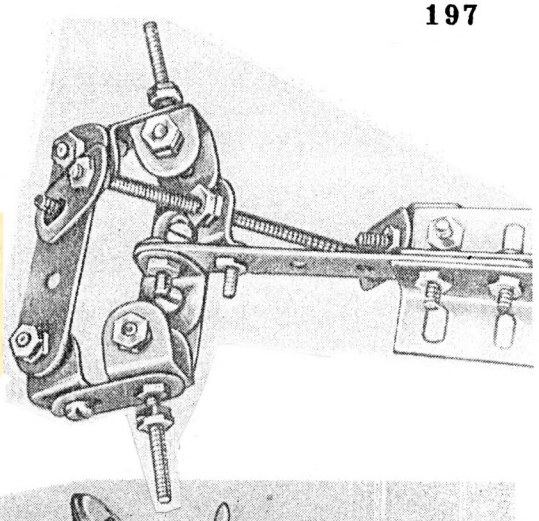
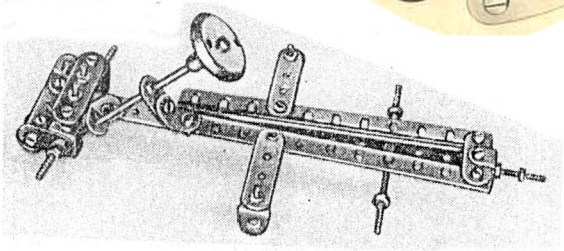


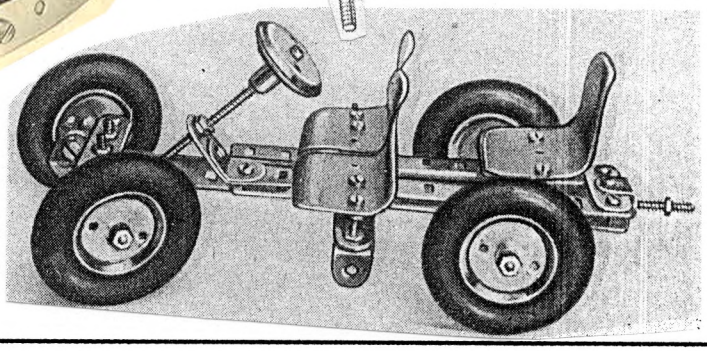
Modell 4

Personen-kraftwagen

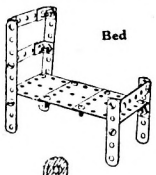
(Limousine)



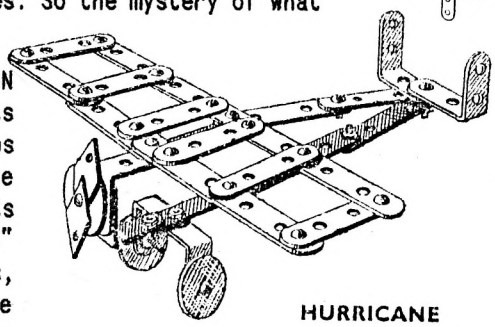




MYSTERY PART No 1. Remember that ERECTOR 5x4 hole Plate [OSN 3/47], Brian Johnson kindly sent photocopies of what I take to be a leaflet about it - the cover, with reference Form M973 on it, mentions no specific set, just 'Make Your Own Toys With ERECTOR'; inside are 'A Few Models Made With One Erector Set', and others that need 2 or 3 Sets. I've chosen one [right] that needs 3 of the Plates. So the mystery of what the Set was called remains, if indeed it ever had a name.



Bed



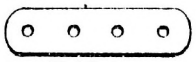
HURRICANE
(Model No. 7)

20 2 in. Strips	4 ½ in. Bolts
6 Brackets	19 ¼ in. ,,
2 Diamonds	24 Nuts
3 Washers	

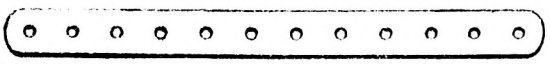
Prize-winning model, constructed with No. 2 Outfit, by Master T. Fynes, Belfast

MYSTERY PARTS NO 18. Those Strips with 3/8" spaced holes (OSN 7/156) have been identified from a manual and some LYNX parts with it, as being almost certainly LYNX. All the short Strips shown in the manual models (as in the one opposite), are the type with no centre hole, although in the Illustrated Parts List (see below), normal pitch is shown. As can be seen the 6" Strip is also shown with ½" spacing but the 12" has 32 holes, that is exactly 3/8" pitch. Both the 6" and 12" Strips with the manual have the 3/8" spacing but the holes in 2" Strips are equispaced, ½" apart. Also the 3/8" pitch holes are 3.5mm dia but those at ½" are the normal, larger LYNX size. So it looks as if all LYNX Strips may well have originally had the shorter spacing/hole dia, with a gradual change to the later standard. No date is shown in the manual but it's probably soon after WW2, with models of a Sherman Tank and a Dakota (UK name for DC3/C47). Actually whoever put the manual together didn't have much idea about aircraft, the Dakota is shown as a biplane with 4-bladed propellers, it looks more like a Vickers Vimy, and that Hurricane has twin fins and a shoulder wing. There was also a LYNX competition entry form with the manual, closing date Jan 1948.

"LYNX" PARTS

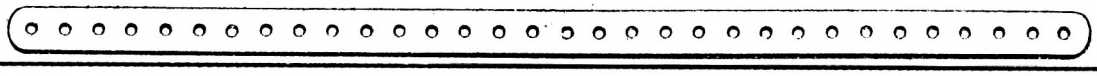


2 in. STRIP No. 21



6 in. STRIP No. 22

12 in. STRIP No. 23



AN EARLYISH STOKYS No.1 SET. This Set, more or less complete, included a 0-2 Manual with an earlier cover than one bought about 1972. The Set Contents are the same in the two but the early one does not show such a wide range of parts in the Illustrated Parts section, no large diameter or helical gears for example. The Chimney, #108, (see OSN 3/31) is there though. On the box lid is a label saying 'New, increased contents' so this set was certainly not one of the earliest outfits. Many of the models in the manual are different to those in the later one. The most interesting difference is in the parts, compared to some dating from, again, about 1972. The web of the Strips is .021", much thinner than the .036" of the later parts; many of the Brackets are unfinished aluminium, not anodised; and the (green) Flexible Plates are made of fibre (like the 1934 MECCANO ones), instead of plastic.

ITEMS FROM LETTERS.

1. Erwin Wyss sent the following note on the history of MATADOR, the wooden system mentioned briefly in OSN 3/44, which he obtained from a fellow member of AMS, Norwin Rietsch: "In 1900 Johann Korbuly (Vienna 1860-1919) invented MATADOR as a toy for his 3 sons. He started production of it at Pfaffstätten in Lower Austria, and he opened MATADOR-Haus (1070 Vienna, Mariahilferstrasse 62) where his products were marketed and sold. In 1978 the company was sold to Kurt Falk, former editor of the 'Kronenzeitung', and today editor of 'Täglich Alles'. After that MATADOR-Haus was modernised with considerable investment, but as with many similar systems, sales fell and production stopped some time ago. There may also have been legal troubles with LEGO. Considerable stocks of parts were available and are still sold in so called 'Schüttelkasten' (Shuttle-sets) for a price of öS 590 [about £35 -Ed]. These sets contain a bit of everything, worth about öS 1000. Should sales increase, which regretably I personally doubt, production could be started again."

2. From Keith Cameron in answer to a query about FISCHERTECHNIK: "fischertechnik (small f) is a most engaging medium. The aim of its manufacturer is to promote it to build prototypes for commercial systems such as production lines and other complex machinery, and large showrooms are set up for this purpose. Its many hi-tech parts include computer interfaces, are what attracted me. (It does have have many parts suitable for small-scale toys). When assembled correctly, it is reasonably rigid within the accepted limits. Rigid light alloy long parts are available. One can build a 4-axis robot in f/t in a couple of hours. I doubt that the same could be said of Meccano! I have a small/medium amount of f/t and I admire its ingenuity and the high quality of the parts, far surpassing most systems. However, its owners can make far more money out of commercial customers and the educational establishment, so tend to neglect hobbyists. This is understandable but irritating."

3. From Don Redmond, " • The new MW 16 DP Worm is of identical pitch to the 'old' (Mysto and early Gilbert) Erector, and the early coarse-pitch Erector Worms fit perfectly with the Meccano GRB and Large-Tooth Quadrants - and when found may be a lot cheaper! • The toyshop firm in Ottawa and Toronto which carried BRAL is out of business and I've not learned of any other Canadian BRAL stockist, though I haven't pursued the matter."

In a later letter he noted the many anomalies in a STRUCTOMODE manual. Many of the models are MECCANO inspired and so double railway buffers are shown whereas North American practice is a single, central stop. Two models appear to show slotted holes rather than the normal round ones, in the flanges of the 11x5 hole Flanged Plate; in a few others the illustration looks more like a Flat Plate with 11 hole A/Gs bolted to it, even though neither part was included in any of the sets. An unusual part is the 3/4" loose Pulley as well as those of ½" and 1" dia, though the latter was not in the sets.

Don also sent details of a Canadian plastic system called THE GROWING ENGINEER/LE JEUNE INGENIEUR which contains parts made in Hong Kong. They are multicoloured and look somewhat like PLASTIC MECCANO, but the Axles are 12.7mm dia with holes of 13mm; Bolts are 12mm o/d. There were 4 Sets available and the Instruction Sheet shows 71 models that can be made from the different sets. Gears and Braced Girders can be seen but are not included in the #1 Set that Don found. Details from Frank Beadle if anyone would like them, he keeps track of all plastic/wood systems. Don also mentioned a LINCOLN (best known for LINCOLN LOGS, a wooden set) plastic set he had seen, which much resembled Plastic MECCANO in the design of the parts and even the colours.

4. José Moreno sent an amplification of the STOKYS address given in 7/167: Grossmate 7, CH-6014 Littau-Luzern. Tel. 041 574159. Fax. 041 868554. He also sent some literature on PROTO and PIC (Precision & Industrial Components). The PROTO Parts List shows a few differences compared to the details in MCS and I hope to include them in a later issue. PIC is a new name to me and José sent the index from their catalogue, addresses of their agents worldwide, and the Contents List of some of the Kits of Parts that are (were?) available. The company is American and the catalogue of over 400 pages lists a myriad of small mechanical items, bearings, cams, gears, differentials, etc, etc, etc. The 9 Kits, 3 each for shaft diameters of 1/8", 3/16", and 1/4", contain gears, couplings, brackets, mounting boards, and the like, with 657 parts in the largest one. My feeling is that this little lot probably falls outside the OS field but if anyone would like to investigate and perhaps write it up, I will be glad to send them the details I have. The UK agent is The Barden Corp, Western Road, Bracknell. Tel.0344 24511.

5. On TECC Brian Rowe wrote: "I have since bought a No.6 Set and it is a comprehensive one with no less than four trays packed with parts - including Braced Girders which are not in any of the Spares Packs. The gears though do not always mesh properly but reaming out the holes to get rid of the paint sometimes helps. I understand that the smaller TECC Sets 1-4 (made by the CONSTRUCTION people) are no longer available."

6. MECCANO's first serious competitor was almost certainly STABIL made in Berlin by Walther & Co. Tobias Haffter wrote that a lady, Emma Walther filed a patent application in 1904. In a 1924 manual,

ITEMS FROM LETTERS.

1. Peter Kessler sent a comment on the MÄRKLIN Seilbahn (Aerial Cable Car) Set that was on the market a few years ago. Toby Haffter and a fellow AMS member made a very much elaborated and improved version with a true-to-life intermediate pylon, but found that MÄRKLIN ½" Pulleys skipped off the cable; so did the STOKYS version and the groove in the MECCANO 23 was too deep to pass the centre pylon. The solution was to turn down the 23's and machine the V groove into a U shape.

Writing last summer Peter added that the quality of the STOKYS parts with bosses tapped M4 [see 7/166] is inferior to the earlier versions, and that many parts were out of stock at the factory, with Electric Motors difficult to obtain and up by 30% in price.

2. Richard Symonds sent (from Canada) a copy of a Feb 1937 ad for a FROG constructional kit of a non-flying Blackburn Shark biplane. The parts are probably mostly of wood and all are said to be correctly shaped. Details to anyone interested. In a later letter he sent photos of 3 plastic systems. • The lid of the FASTECH box shows 5 small vehicles made from perforated Strips and Plates, and longer Beams of perhaps U section, and Wheels of course, two sorts, Road Wheels and what appear to be smaller spoked Wheels; the parts are white, red and black and are held together by some form of rivet - to quote the box, 'Includes the unique, fast and fun Fastech™ tool, many Fastech™ fasteners, ..'. The name Schaper is on the lid, no doubt the manufacturer. • The second box lid is CAPSELA 400 and again carries several vehicle models, but this time they are very stylised, being basically red Wheels fitted to combinations of spherical, transparent capsules which contain various forms of gearing, and plug into one another. The only other parts are yellow spheres which are used to 'improve' some of the models. 22 motorized models can be made and the motor runs off 1 AA battery. The lid in the photo is in both French and English, as it would be if sold in Canada, but it's not clear where the Set is made; it was on sale in the UK quite recently and in a 1991 toy catalogue Sets #200, 400 and 1000 are listed. Also shown on the model illustrated in the catalogue are red Sprocket Wheels connected by black, metal or plastic Chain. • The final photo shows the lid from a Gabriel YOUNG ERECTOR Set with 4 varied models on it - a Lifting Bridge, a Car, a Crane and a skeletal House. They are all attractive looking models and all look considerably larger than normal ERECTOR models would in relation to the youngster shown by each of them, but that may be the photography. The parts are coloured red, white and blue with black N&B, and all look quite similar to normal metal parts, with Strips, DAS, Plates, a Flanged Plate, Trunnions, etc. The Wheels can be fitted with Tyres but are not grooved like pulleys but instead have gear teeth; only one size can be seen and none of the models show these Gears meshing but there is something about gears on the lid and I can't read what it says. • Going back to the CAPSELA, I've just noticed that there's a sixth model on the lid, a Tanker, the ship sort because the name in french is Bateau Pétrolier. Again it's basically several Capsules joined together but at each end there are 2 of the yellow spheres and they look as if they give enough buoyancy to make the model float; the Motor is above the waterline and drives a Propeller under the water. All rather fun, and maybe my grandson ought to have a set for his next birthday! • Again please ask if you would like more information on any of these sets.

Richard also sent a correction on HUSTLER ACTION TOY, the wooden Wheels mentioned in 9/228 have rubber inserts in their centres.

3. Jeannot Buteux sent a postcard from Denmark and mentioned that he'd come across several OS there including DEN DANSKE INGENIØR, c1935. In a later letter he included some details of an exhibition of MECCANO and Other Systems held in the Municipal Library at Saint Julien Les Villas for 2 weeks last December. The group CONSTRUCTORAMA showed over 130 OS Sets there with as many again represented by a display of parts or literature. Quite a show. Jeannot also sent a list of OS which are not included in MCS and I hope to include this in OSN 11. On the subject of the name of the GILBERT NEW WHEEL TOY (OSN 8/198 and 9/219), he notes that it was shown in a La Samaritaine department store catalogue of about 1920, under the name JOUET DÉMONTABLE GILBERT [Gilbert Constructional Toy]; and on ERECTOR, it is known that it was on sale in Belgium around 1920 with a manual in French.

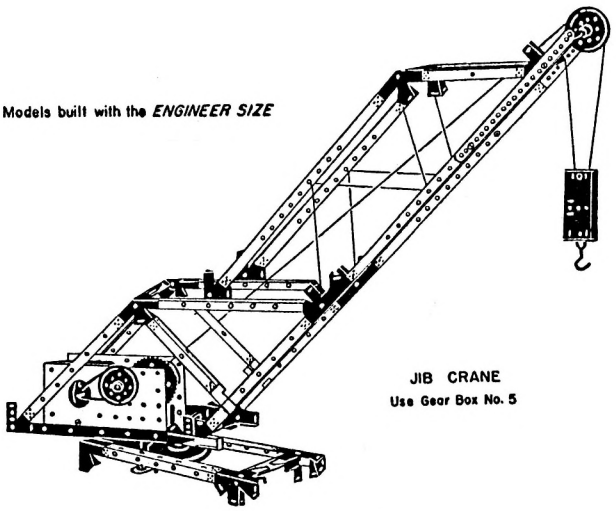
4. Roy Zuehlke from Wisconsin wrote that as well as MECCANO he sells MÄRKLIN sets and parts, and TEMSI sets - he didn't say if he had their parts separately. Also when he wrote, last autumn, he was on the point of importing a range of some 200 different EXACTO parts. His address: Valley Transport Inc., P.O.Box 148, Plymouth. Wisconsin 53073. U.S.A. Tel/Fax: (414) 528-7197/7404.

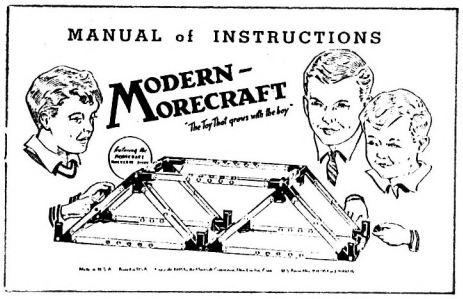
5. I was rather far out in my translation of the MÄRKLIN slogan Technik mit Köpfchen (9/209), Geoff Davison kindly pointed out that it really means Technology with Brains; Köpfchen does mean little head but is also a slang or humorous word for brains.

6. Donald Bock has been trying to track down sources of MERKUR parts/sets and after some difficulty discovered the telephone number of the factory in the Czech Republic (447 21901); but when he rang no-one there spoke English. He had more success with Inter Toy in Holland (Tel: 206 115151) where a lady called Karina Appledorn spoke English and was very helpful. It's not certain though whether they

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

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





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

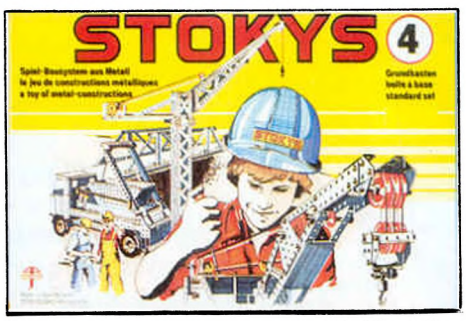
SOME MORE OS NAMES Jeannot Buteux send the list below, of systems for which he or the group CONSTRUCTORAMA have paperwork and/or a set, and which are not in MCS. Jeannot has of course been a major contributor to MCS in the past and I hope that he will be able to send details of these new systems so that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

ALEMANI; ARTS & MÉTIERS 3 [#]; ARQUITECTURA; BERGLAND; BURGER; CAMIONEL; CONSTRUC; CONSTRUCTOR [FR, 1916]; CONSTRUCTOR [GE]; CORUS; DEN DANSKE INGENIOR; DER KLEINE INGENIEUR; DITMAR; DORANDO; ÉCÉPÉ; EFEL [#]; EIFFEL [DE]; ELEKTROMECH; ELEKTRUS; ESCHOT; FANTASIE; F.D.K.K.; FIX [#]; FRI-BIE; FRYDAGH; GLOBUS [GE]; GLOBUS [GEE]; HOHA [#]; I.B.J.C.; IDÉALE MÉCANIQUE; INVENTOR; JEEP AUTO; JIEL; JOLEI; JUGA; KINEMA; KOHLER; KONSTRUKTOR [GE]; KONSTRUKTOR [GEE]; KONSTRUKTOR [PO]; KONSTRUKTOR [RS, 4 different]; KONSTRUX; LE MÉTALLO; MAXI-FUN; MABA; MALY K.; MECANIC [GE]; MÉKA; MÉTAFLEX; METALBOUWS; METALL [BE/GE]; METEOR; MEWEKA; M.F.C.; M.K.A.; MLODY; MONTIX; MÖWE; M.W.K.; OREGION; PLASTICON; R.M.; RUR; SATURN; SIEMENS; SPRANGER; STABILA; TECHNIK; TEST; TUBA [GE]; TUPO; WIFRA, WESFALIA; ZICK-ZACK.

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

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

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



The brochure shows the same standard sets 0-4, linking sets, and Gears Sets, as in 1981 (the last List I have), with the same number of parts in each. The boxes are different though with a boy in a hard hat working on a building site with suitable models, different for each set, all around him. And the manuals may have been updated too because several of the models shown for the different sets are not in mine from the 1970s. The 00 and K1 (Bridge) Sets are no longer listed. Additions are the 3 special sets to make the Crane, Big Wheel, and Truck, that were only available as plans in '81, and the 3 Auto Sets 1, 1a, 2 described in 8/174. The parts in the #1 and #2 are given as 225 and 365. There is no mention of the Potter's Wheel that was listed as a plan before. One new set is KP11 which is to make one small model; also listed are parts packs ET01-61 but with no details.

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

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

ITEMS FROM LETTERS

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

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

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

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

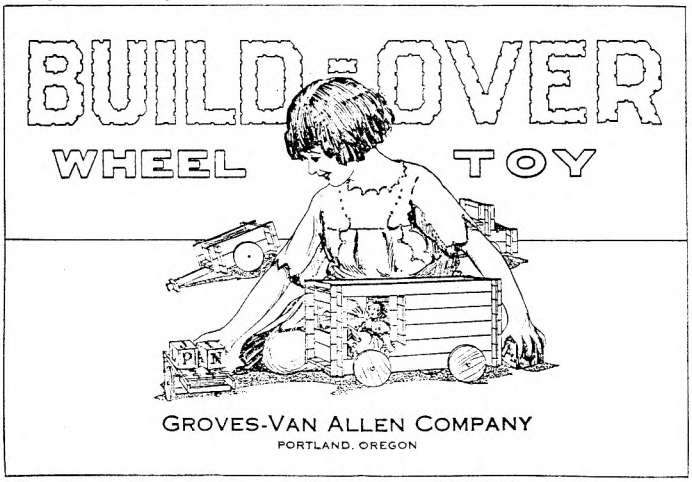
5. Eric Sinton sent a clarification of his remarks in 10/267(8): STOKYS Chain can of course only be used with STOKYS Sprockets. He added that when he dismantled the model in question, a Rack and Pinion Locomotive, which had worked faultlessly for many hours with its STOKYS Sprocket engaging MÄRKLIN Large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

And on 9/227: BRAL Copriruota is a Wheelcover (Conical Disc in Meccanoese). The standard steel parts 3044, 45mm for the 50mm, and 3045, 66mm for the 75mm Pulley, have a narrow steel strip rivetted in the central hole. The ends of this strip are bent in such a way as to make it easy to clip the disc securely to the Wheel. The plastic version seems to have a stub axle (also in plastic?) which may indicate some use other than as an attachment to the 50mm Pulley.

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

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

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



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

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

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

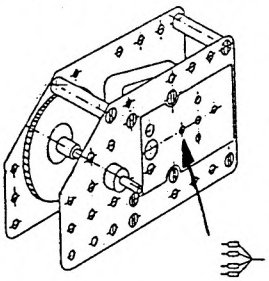
the parts look the same, with the same PNs, there are the same number of models in the Manual, and the 2 models that Jeannot sent are both in the WENEBRIK Manual, although the Model No. of the one shown above isn't the same. The illustrations of the models are identical except that the window panes are black instead of white. The colours of the parts are noted as red, blue, gold and green with a metallic look to them; again the colouring is only on one side, with the other shiny metal.

ARQUITECTURA is thought to have been produced in the 1930s and on the cover of the manual it says that it is patented in Spain, and that Metaling of Barcelona are the sole manufacturer. 7 foreign patents are claimed on the WENEBRIK box lid but not a Spanish one, though it's said that others have been applied for. Metaling of course used to make MECCANO under licence (and later marketed their own clone) - no doubt Baileys also licensed Metaling, the 1915 patent would have run out in 1931 but not the copyright on the manual.

STOKYS UPDATE The following is based on material kindly sent by Werner Sticht and Josep Bernal, and follows on from the notes in 11/291.

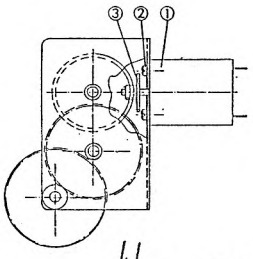
The range of sets for 1994 continues as before but with the addition of a new special set, SM 05, to make a Tractor. It isn't illustrated but is the same price as the Tipping Lorry.

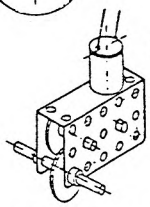
Elektromotor



EM 10

The only 20v motor shown is the EM10 (below) which is the same power as those replaced but has different sideplates. The basic 3-6v battery motor is now listed as BM 01, and as BM 10 with Battery Holder and Cable. Its speed is given as 3000-6000rpm and the output power as 1,4 W. It is also available fitted with a gearbox (opposite), in two versions, GM 01 with 2 stage reduction, and GM 10 (men- tioned in OSN 11) with three. The first stage is the motor pinion driving a (plastic?) contrate. Standard gears are used in the later reductions. The quoted rpm are 250 and 50 respectively. It is said that the output shaft can be used as the back axle of the Auto Set models and that this gives a speed of 10-30 cm/sec, say up to 1mph. There is also listed a remote control unit for vehicles; no details are given but the price of Fr.189 would indicate something more sophisticated than a switch or rheostat on the end of a cable.





GM 01
GM 10

Stokys also have a first (I think) in having for sale, at Fr.29.80, a Hard Hat like the boys in their ads wear.

The Illustrated Parts List shows a few changes. The 'Z' section Girders G41-46 are replaced by 'L' Girders G51-56 (2*1 holes), although illustrations of both types are shown. R51, which was a Cone Pulley, is now a single 35mm Pulley. Two new Double Gears are introduced, Z15 with 11/66 teeth, and Z16 of 11/40 - they aren't illustrated but if they are the same style as the ones in the Geared Motor, the Grub Screw is between the gear and the pinion. Finally the 'F' Plugs and Sockets are no longer listed, nor are one or two of the obsolete $^{5}/_{32}$" BSW threaded parts.

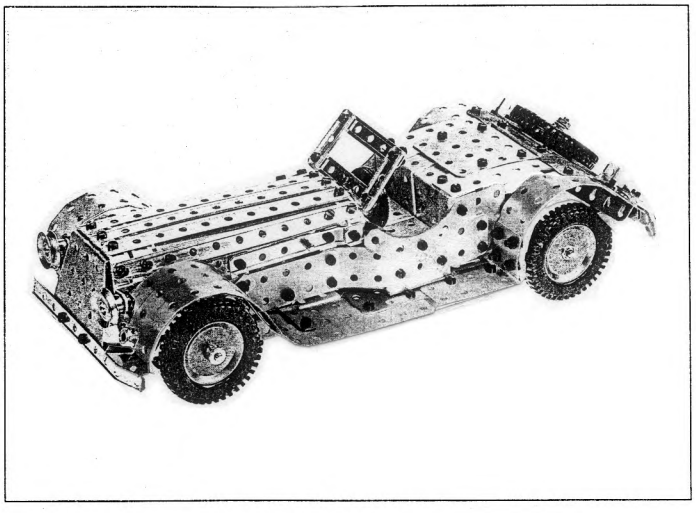
Werner included some copies of models from the Auto Sets manual and it's clear from the Parts Lists for them that the notes on the wheels in these Sets given in 8/174 were wrong. Set 1 contains the Wheels with the wide, thin Tyres, R62 (47mm o/d), and Set 2 has as well 35mm Pulleys R06 and 54mm dia Tyres R08. In passing I wonder what the difference is between R06 and the new 35mm Pulley R51. A Sports Car from Set 2 is shown opposite, it has proper steering but no other mechanical functions.

Werner also sent some notes on the history of Stokys and on the parts. For the former I'll mention those points which weren't covered by the notes in 7/167. During the war the use of brass was prohibited and when some was used despite the ban, the authorities found out, even though nickel plating was supposed to hide the evidence, and Gebr. Stockmann were in hot water. The change of name from Stokys Eiko AG to Stokys AG took place in April 1987 and the company moved to Grossmatte 7, 6014 Littau. It shares a building with Fema AG who make electrical motors and brakes, and both firms probably have the same owner. The head of Stokys is now Ernst Bösch and the board includes Jolanda and Angela Bösch (who are I believe his daughters). Stokys phone number will change on 4 November 1995 to 041 2504159, Fax 041 2504158. Pierre Gauthier AG, mention in OSN 11 is a toy merchant and not otherwise connected with Stokys.

On the parts Werner notes that a big advantage of most of them being of alloy, is that crane jibs and the like are relatively light. To minimise friction and to avoid excessive wear, Nylon Strips (K42/43) are provided as bearings. Axles are 4mm and have a polished look with properly finished ends. Gears are accurately made and don't fit MECCANO Axles. In about 1980 the Gears Z05 and Z07 were changed from 64 and 50 teeth to 66 and 52, thus giving integer ratios with their 11 and 26 tooth Pinions. The current Z07 no longer has the 8 peripheral holes of the original. Gears have usually been made of brass but at different times some, such as the Helicals and Worm, were of aluminium alloy. Following the change to the M4 thread, the bosses had a silvery finish to distinguish them from the $^{5}/_{32}$ BSW brass ones (see 7/166), but now some bosses are brass, tapped M4. The new Double Gear Z15 has a 2cm long boss fitted to the Z05 disc, with the 11t pinion formed in its end, and the double tapping for the Grub Screw is between the gear and the pinion.

OLD-TIMER

Modell 1009



Gebaut aus Auto 2

to force a Bolt through if the vertical Strip was the wrong way round. Turning it over solved the problem in most cases but then it wasn't always possible to have the slots in the vertical Strips facing a particular way. That didn't matter in this model but it might well be a problem in a larger structure. This underlines how accurately the parts had to be made to make the system of half-joints work - everything would have been easier if the holes in the parts had been slightly larger, but that would have meant more play in those 90° corner joints. The next thing was that there was only one Nut available for each Bolt that held a Wheel Disc and so if it was tightened the Discs wouldn't turn. This was true of several of the models with wheels. The Threaded Rod which joined the handles at the top wasn't really needed, and removing it released the 4 Nuts needed as locknuts for the wheels. It also made the model look a bit less like a pram. It would have looked better still if the handles could have been at a slightly lower angle but the side of each Curved Strip had to lie against the side of the cross Strip, or alternatively each Curved Strip had to be rotated so one of the angled flats at the end of it was against the cross Strip - but then the minimum turn of 45° made the handles too low.

Everything was a lot easier with the TRIX, and a similar sized model was made, with much the same layout, although the front and back cross members at the top were just Threaded Rods because there were no Strips to spare, or N&B. Probably the MEX model was slightly the better looking even with the ends of the cross Strips sticking out, but where MEX really won was in the appearance of the shiny nickel parts against the dull, patchy looking TRIX.

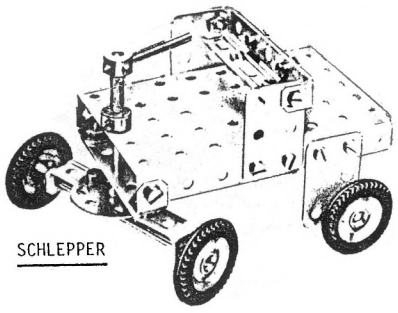
Among the 7 claims made for MEX in the G&T ads is 'Pliable steel strips easily bent to any shape'. The Strips I have are made of fairly soft steel and can be curved, but the slots have to be gripped in pliers to avoid bending at that point. A sharp bend at the end slots did produce some useful DAS and such bends could be straightened out, although to do so more than once would risk the metal breaking.

THANKS are offered to Roger Baker, Richard Gilbert, Malcolm Hanson, David Hobson, and Tony Matthewman for contributing the material used in this account.

STOKYS UPDATE Tony Matthewman kindly sent some leaflets that he picked up at a trade fair early in 1996, and others from January of this year. Mostly nothing has changed since 1994, see 13/335. A 2*A4 colour brochure is identical, except for NEU on the '96 cover, and 96/97 on this year's; a 1996 export price list shows the same items at the same prices except that the small KP 11 set is slightly cheaper.

But one addition to the 1997 range is a Bridge Set, BK 01, at 98 French Francs. No details are given but its price suggests that it might be about the same size as the K1 set that was dropped some years ago. Also a number of packs of parts are shown on a separate sheet, but it isn't clear whether they are a new line. There are 23 in all, (perhaps 24 because one has a price but no other details) from item ET 01-1 to ET 54-1. Most are devoted to a particular type of part - thus packs of Strips, Plates, Tyres, Sprockets, etc, etc. All are 10FR. (Swiss I should think), except 2 at 20 (Sprockets and the mystery one), and 2 large packs - ET 1000 at 220FR, with 1 each of all the 10 & 20FR packs), and ET 2000 at 200FR, with 3 each of the 8 packs that contain structural parts.

A couple of new points in both years. On a separate sheet about the motors, the speed range of the GM 01 & GM 10 motor/gearbox units is given as 100-200 and 20-40rpm respectively. On another sheet is an ad for the KP 11 outfit: it has enough parts to make either a 2-Wheel Luggage Barrow or the Tractor opposite.



SCHLEPPER

HANDY CRAFT I mentioned the Strips from this small 1920s American system in 15/426, and now Richard Symonds has kindly sent photos and some details of a small set that came his way recently, and a few of the parts too for me to measure up. It is in a buff card box 10*6*3½" high with the name of the set - HANDY CRAFT **Windmill** - on the sides in green (below). The lid is printed in red and green, and shows a boy looking at a simple Windmill model (below) which seems to have just been created by a magician (or fiend). The wording says that as well as the featured model there are enough parts to make over 50 others. At the bottom is COPYRIGHT 1926, and the maker: The Hart & Cooley Co., New Britain, Conn., U.S.A. The manual is missing but the set itself is probably fairly complete and the most of the main parts are shown below, followed by some general notes. All parts unless otherwise stated are nickel plated, and all are well made although the Strips are of rather soft steel.

- A 5*11h Flanged Plate is painted a lightish red and flanged on the 11h sides. Some of the centre 3*7 holes are joined to make the initials H C.
- A pea green 8h Wheel Disc which scales at 37mm o.d. 4x1" Wheels, the centres of which appear to be pressed through with one face concave, and with rims formed into a thin 'tyre' shape.
- 2x3½" Axles, 4.00mm Ø, with neat ends finished with a small radius, and a Crank Handle 5" o/a with a 3¾" shank. Cup-shaped Axle Stops of ½" Ø, upset at the centre with a square hole leaving 4 small tabs on the convex face which grip the Axle tightly. They are made of springy steel and have a blue look to them. In the Windmill they are used either side of the Wheel Disc to lock it to the Axle, and pairs back-to-back form small pulleys.
- A flat Wire Hook about ⅞" long. 8-32 N&B with square Nuts 8mm A/F and 2.6mm thick, and Bolts with 7.7mm Ø round heads, and ¼" u/h. A slightly unusually shaped Span'driver, about 2⅞" overall.

The illustrations above include a 3*3h Triangular Plate which may not have been part of the Set. The only other parts known are the 1*5*1h DAS, a 7h Strip, and what looks like an Angle Bracket in the illustration of the largest No.4 set in MCS.

Notes on STOKYS 1946 - 1981 Apart from the years 1942-44, for which no information is to hand, this account is about the period before the company changed hands at the beginning of 1982. Some of the subsequent changes were recorded in 7/166, 13/335 & 16/453.

For anyone new to STOKYS, it is a quite large system with ½" hole spacing, 4mm Axles, and (during this period) 5⁄32" BSW thread. It is the only major system in which the structural parts are aluminium. Some of the other parts are aluminium too but Gears and small fittings are usually brass; very few are steel. There are a wide range of Plates (but only one size of Flexible Plate), Brackets, Girders of different sections, Gears, & Sprockets (with both Ladder & Roller Chain); and a fair range of brassware & fittings. The largest circular parts - a Pulley, Gear, Sprocket, & Face Plate - are all about 115mm diameter.

The Strips are unusual for a ½" system in being only 10mm wide, and they are cut to length (with chamfered corners) from an extruded shallow U-section, with rectangular edges 2mm by 1.5mm deep, joined by a thin web. Thus they are light but adequately rigid, and structures light in both weight and appearance can be made from them. The A/Gs too are smaller than is usual, and are bent up from 24mm wide material compared with 27mm for MECCANO. The narrower Strips mean that there is an appreciable gap between them when they are bolted side by side, and this also occurs between say, two adjacent Plates, because the edges of most parts are cut back to line up with a Strip bolted along an edge. This can be unsightly but in practice can often be avoided, or disguised, given the range of parts available. (Aluminium parts are also ideal for 'mutilators'.)

Since a good many changes occurred over the years, the first item below (after some details of the covers & labels for reference) is a summary of the history of the system. Then notes on the sets & their packaging, the parts, and finally the manuals & models. Discussion of the how certain items were dated, and Summaries of the manuals, are appended.

The details in all this have come from various Manuals, Leaflets & Price Lists; 3 immediately postwar sets and two later ones that David Hobson kindly lent me; a No.1 Set believed to be from about 1949; a selection of parts bought in 1973, and a few of later date.

Throughout 'starred' parts are illustrated.

LID LABELS & MANUAL COVERS The 6 types known are shown at the top of the page opposite, and for ease of reference they will be given names. In some cases, and perhaps in others as yet unknown, they were used as both labels & covers, with only the wording changed. From top left down, then top right down:

- The **'Log Saw'** cover & label, with the Log Saw in B&W in a large coloured panel, and 5 models to the right, also in B&W. The panel is yellow for Sets 0-2, blue for 3-4, & red for the Gear Sets G1/G2.
- The **'7 Model'** cover & label, with 7 models set against a yellow road, green fields, and blue river & sky.
- The **'Crane'** label, 6 panels alternately yellow & green, with the Crane on the left and STOKYS top right in red.
- The **'Digger'** cover & label, with the model against a brown background, and a bottom panel colour coded as for the 'Log Saw', plus green for the K1 Bridge Set.
- The **'2 Model + Boy'** label, yellow with STOKYS in red and the boy in a green jumper.
- The **'2 Model'** cover, in B&W on pale yellow in the only examples known.

SUMMARY OF HISTORY

c1945 Sets 0-4, 0a-3a, Gears Accessory Sets G1 & G2. 'Log Saw' lid labels & manual covers. 76 parts to #106.

1946 Electric Motors M1, M2, & Transformers TF20, TSM20 added. 109 parts to #142, including Channel Girders, Tyres, a Ball Bearing, & more Gears.

c1947 Sets 00, 00a (probably), & Spring Motor F2 added. A few parts added to Sets 0, 2-4.

c1949 Set contents increased. '7 Model' labels/covers. The Transformers replaced by 1 new one, still called TF20.

1950 K1 Bridge Accessory Set & F1 Motor added. 146 parts to #154, including 115mm Ø parts, Braced Girders, and more Gears including Helicals.

By 1964 First manual to hand with 'Digger' cover. Transformer TR30 had replaced TF20. 176 parts to #159 including more Brackets, Plates, Fittings, & Gears. #108, the wooden Chimney, no longer listed. The Flexible Plate now plastic, red, green, or clear.

By 1966 Very small change to Set 4 contents. F2 Motor dropped.

1967 F0 Motor introduced. Sets 0-4 have 'Crane' label (possibly as early as 1964). The '2 Model' cover in use for the 00 Manual.

By 1970 M10 Motor introduced.

By 1972 Parts in Sets 0-3 packed in formed plastic trays. 0aP & 1aP Sets added. Sets 00,G1,G2 have 'Digger' label, and K1 the 'Crane' label. 206 parts to #164,300,646, 648, including a 5*16h Flanged Plate, Z-Girders, more Gears & Fittings, and a kit of parts to make a Differential.

1973 1aP dropped. No other changes.

By 1979 No.400 Track Set added. No.4 has top layer in plastic tray and '2 Model + Boy' label. 0aP Set & F0 Motor dropped. 5 Special Model Leaflets listed, with sets of parts to make them available. 217 parts to #216,300,405,410, 646,648, including 38 & 76t Gears, a 76mm rubber-tyred Road Wheel, the Track Link, Dredger Bucket, & special parts for the 'Stokysgraph' & Potter's Wheel.

1980 New 5 figure PNs starting with '2' used in one UK dealer's List, in this year only. No other changes.

1981 A PK 'Professional' Set reported, with parts to make the 5 Special Models. 1 new part, #420, Track Wheel, to make 218 in total. No other changes.

SETS By 1945 Sets 0 - 4, linking Sets 0a - 3a, and the Gears Accessory Sets G1 & G2 were available. The 00 Outfit, was added in 1947 (also a 00a at some stage, and probably then), and by 1950 the K1 Bridge Accessory Set. By 1979, & through 1981, a small No.400 Accessory Set containing Track Links & Dredger Buckets was listed. The only other known change was that by 1972 Sets 0aP & 1aP were available, and in 1973 only the 0aP. The 'P' indicated that the sets were packed in plastic bags. In detail:

Set 00 No changes were ever made to this Outfit.

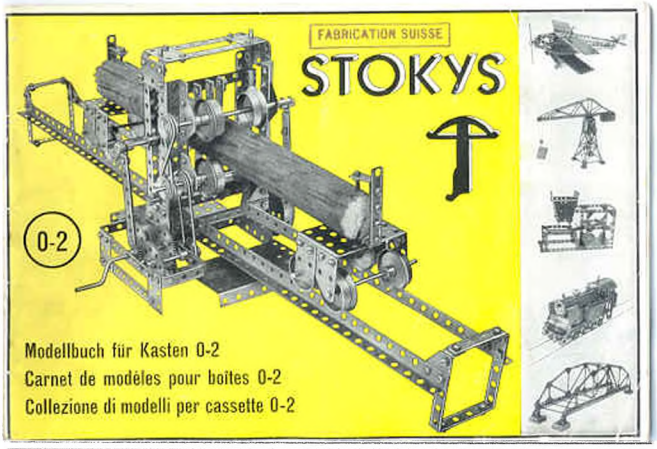
Sets 0-4 More parts were added to these outfits between 1946 and 1950, notably Tyres in Sets 0-4, and N&B in Sets 2-4. Other additions included some extra A/Gs, and, for the first time, a few Spring Clips & Washers. Otherwise only a few very minor changes were made, mainly in the mid-1960s. No new types of parts were added after 1946, and of the eventual 218 parts in the system, only 94 were ever in the sets (including 17 parts that were only in the G or K Sets. The final contents of the No.4 included 22 A/Gs, 8 Gears, & 350 N&B.

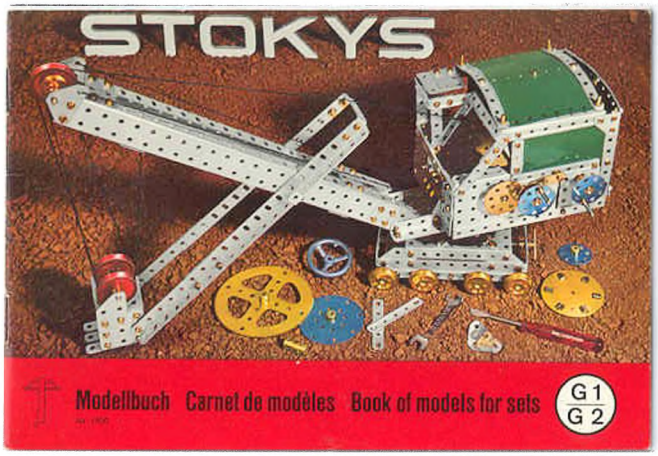
Gears Sets 12 extra parts, to make 190, had been added to the G2 Set by 1946 and it then included 6 A/Gs, 10 Gears, 4 Sprockets, & 103 NBW. The G1 had 106 parts including 7 Gears & 3 Sprockets, but with only 50 NBW and fewer 'interesting' parts.

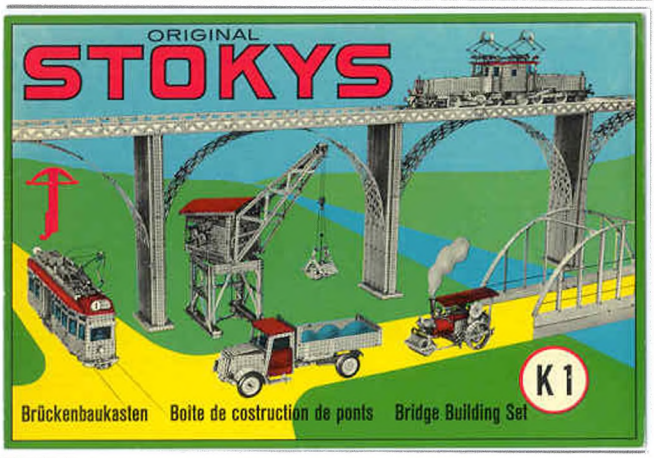
Bridge Set Included in it were 6 A/Gs, 16 Channel Girders, 4 each of long 4h wide Plates & Braced Girders, and 68 N&B. Many of the parts were 24 or 32h long.

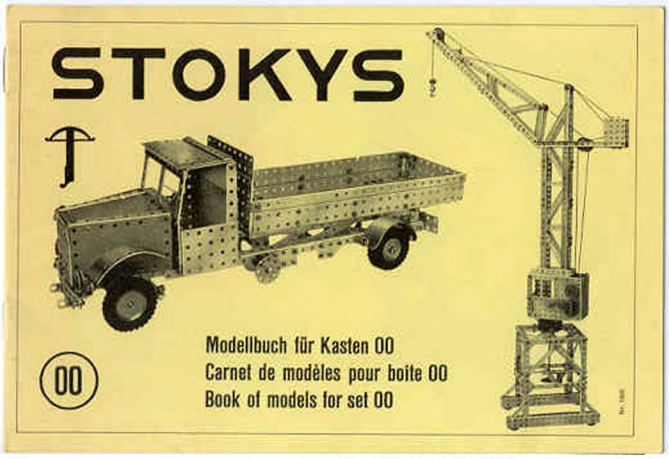
PK Set It is said to have been packed in a wooden cabinet with 3 removable trays containing 2143 parts, including enough to make any of the Special Models.

Packaging Most of the boxes seen have been red outside, but the two K1 sets known are green. At first parts were loose within partitions or attached to backing cards; later formed plastic trays were used.









1945 All the parts in Nos.0, G1 & G2 were attached to a box-size backing card, many by N&B, while in the other sets the parts were within partitions, with some bolted, or otherwise attached, to smaller cards. The backing cards for the G1 & G2 had an area clear of parts with STOKYS & the Set No. ('STOKYS #' henceforth) printed on it in large black letters, and these cards were used throughout the period.

The actual 1946 Sets The 2 & 2a are in boxes, 27*48½*2½ & 24*45½*2½cm respectively, red outside and blue inside. The box for the G1 is missing but the backing card is 20*40cm, and is red (as is a small one in the 2a) with the large black 'STOKYS G1'. The 'Log Saw' labels on the lids are 16*22½cm, and the coloured panel on the No.2 is yellow, and on the 2a, blue.

1947 The parts in Nos.0 & 1 were attached to single cards, and they, and the 00 card, had 'STOKYS #' printed in a clear space on them, probably in red. The style can be seen in the illustration of a more recent No.4 Set shown later.

The actual 1949 Set This No.1 was mentioned in 8/197. The box, 14¼*18*1", is red, with the inside of the bottom plain, and the inside of the lid blue. The lid has a white label on it saying 'New increased contents' in French & German. The parts are on a red card, with 'STOKYS #' in red on 1 of 5 buff panels, and are laid out somewhat differently to the 1947 No.1.

About the Mid-1960s to 1971 By perhaps 1964 (at latest 1967) some changes had been made. The layout of the parts in the 00 looks just as it did in 1947, and the No.1 is very similar to the 1949 Set, but the others had been significantly rearranged, and there were fewer partitions in Sets 2-4. (The No.4 shown top left overleaf is from this period, and, judging by later photos, there should be a card of Corner Brackets where the Axles etc are shown in one corner of the top layer.) The 'STOKYS #' on Sets 00-4 is in red on a yellow panel.

1972 & 1973 The 00 & No.4 layouts remained unchanged but Nos.0-3 had been rearranged and were packed in formed plastic trays.

Mid-1970s A Leaflet probably from this time shows the trays as in 1972-73, and coloured yellow. The top layer of the No.4 is now in a plastic tray, while the bottom has the earlier partitioning but is in a matching yellow, rather than the earlier blue.

1979-81 No changes had been made except that at some

time after 1978 the No.4 has yellow plastic trays top & bottom; the top layout is as in the mid-1970s, the bottom has a few changes.

Linking Sets. Apart from the 1946 No.2a, nothing is known of these until the whole range is shown in the mid-1970s Leaflet. In it No.00a has the parts attached to a red card with 'STOKYS #' in black on it (like the G cards), and in all the others they are in yellow formed plastic trays.

The **K1 Outfit** hasn't been mentioned. The earliest known illustration is from 1972 and shows two layers of parts, each with the parts bolted to a card, and 'STOKYS #' in a clear space on the top one, in the style of the No.4. This packaging remained unchanged through 1981, and in the mid-1970s colour Leaflet, the backing cards are yellow.

Lid Labels In **1945-47** the 'Log Saw' label was used. By **1949** (probably when the set contents were revised) a change was made to the '7-Model' design. By 1967, and perhaps from around the **mid-1960s**, the 00 & G2 Sets still had this label but Sets 0-4 had the 'Crane' label. **1972 & 1973** Lists show the 'Crane' label on Sets 0-4, and also on the K1 Outfit. The 00, G1 & G2 have the 'Digger' label. These labels are shown again in Lists for **1979-81** except for the '2 Model + Boy' label on the No.4. A Bridge Set from after 1979 with a 'Crane' label is known, and also one, no doubt earlier, with a 'Digger' label. It isn't obvious where the latter fits in chronologically, and one wonders if this label was ever used on any of the 0-4 Outfits.

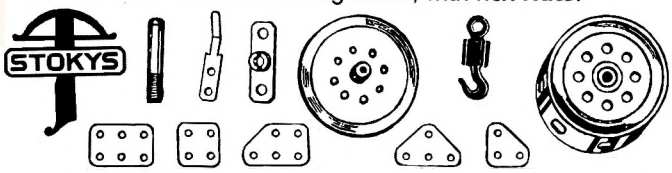
PARTS A summary of when the parts were introduced will be given, followed by some notes on actual parts and changes in design, etc.

As already mentioned most parts are aluminium but Gears, Sprockets, Flanged Wheels, bosses & small Fittings are usually brass: the few exceptions will be noted. Also cases among the 1946, 1949 & 1973 parts where aluminium was used instead of brass, or vice-versa. Other examples of such changes will certainly exist.

Circular parts, where size permits, usually have rings of 8 holes on 1" & 2" pcd. Slotted holes are comparatively rare in STOKYS and will be mentioned when they occur. Most parts are illustrated in MCS but some variants, and unusual or interesting ones, are shown here.

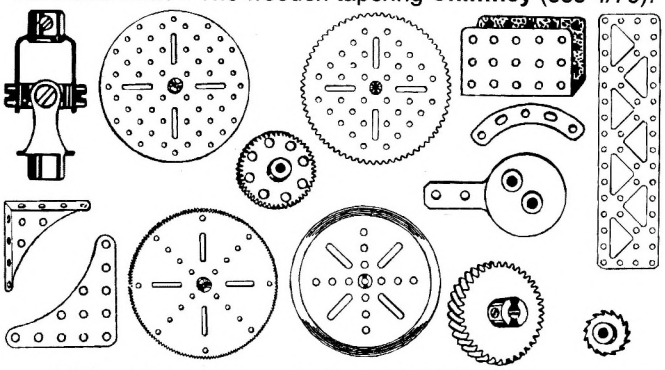
Most brass parts of any size, and aluminium parts other than Strips & Brackets, are stamped with the Stokys 'Bow' logo (below). The ends of some brass Pinions, Couplings, etc are sometimes stamped 'STOKYS SWISS' around the bore. Tyres too (but not the smaller ones, nor Rubber Rings) are so marked on one side.

1945 The main parts comprised: • **Strips** from 2 to 32h long. The 5h Strip has slotted end holes. • **Double Strips** (flat plates, 23½mm wide) & **A/Gs** from 8 to 32h • 6 **DAS**, & 6 **Brackets** shaped like M11,11a,12,12a,45,125. The A/B has slotted holes in both arms, but all the holes in the Reversed A/B are round. Also 5 useful small **Joint Plates*** & **Corner Brackets***, 2*2h & 2*3h. • 3*3, 5*4 & 5*8h **Flanged Plates**. 5*4 & 5*8h **Perforated Plates**. A 5*5h **Sector Plate**. A 5*8h **Flexible Plate** made of fibre. • 20,35,60*mm **Pulleys**, a 12mm Loose Pulley. A **Flanged Wheel** (described later). • A 34mm Ø **Bush Wheel** & a 60mm Ø **Face Plate**. • **Gears**. A 19t Pinion, 57t Gear, Worm, & a 30mm, 44t Contrate. 2 Sprockets, with 6mm pitch Ladder & Roller **Chain**. • A 9mm Ø **Collar.** A 10mm Ø **Coupling**, with cross bores like M63. A **Pawl*** to use with the Gears. A **Threaded Pin*** with no shoulder. A **Loaded Hook***. A 10cm **Screwed Rod** with 15mm unthreaded at one end. A **Double Arm Crank***. A **Double Bearing Bracket** (see later). A **Ball Bearing** with 30x 4mm Balls running loose in the grooved faces of 2 identical 60mm Ø Flanged Discs*. This Disc is chemically blackened steel with 8 slotted holes in the flange. • 5 **Axles,** 3 to 15cm long, a **Crank Handle**, & a **Crankshaft**. • Normal & Long **Bolts**, with hex **Nuts**.



A very fair selection of parts on the whole, though with one or two surprises. The number of parts with an even number of holes for example, with the long parts having 16, 24 & 32 holes, and numerous parts with 4 & 8h, and even a 10h Strip. There is a 2h Strip but no Flat Bracket, and the lack of A/Gs shorter than 8h would be noticeable.

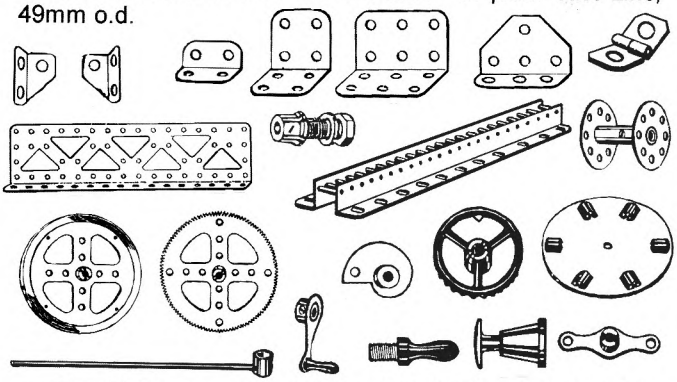
1946 & 1947 New parts included: • 8 & 16h long 1*2*1h **Channel Girders**. • 7*8h & 4*24h **Perforated Plates**. 2h wide **Channel Bearings**, 5* & 7h long. • **Bevels** , 26t, & 64t with 4 face holes; & a 40t **Gear**. • A **Big End** (see later) to use with the Crankshaft. • A **Universal*** (with the **Fork Piece** & 12mm Ø **Yoke** available separately). • A 4-segment **Dog Clutch**. • An 80mm long length of **Spring Cord** with hooked ends. • A **Tension Spring**. • A **Spring Clip**. • **Rubber Rings** for the 20 & 35mm Pulleys, & **Tyres** for both those & the 60mm (though at this stage they look like fat rubber ring in some illustrations). • A 20cm **Screwed Rod**. • The wooden tapering **Chimney** (see 4/70).



1950 New parts: • A **Curved Strip*** without raised edges; • Additional lengths of **Channel Girder** & **4h wide Plate** from 8 to 32h long. • **Corner Gussets**, Flat*, Single- & Double-Flanged*. • A 12mm **Pulley** with Boss. • 2 new **Flanged Wheels**, one to replace the previous type, a Tyre for it, and a 20mm Ø version (see later). • A **Face Plate***, **Sprocket***, **170t Gear***, & **Pulley***, all of about 115mm Ø (a 1973 Sprocket has additional holes outside the slotted holes, & the outer holes on the 45° radii). • **Gears**. A 19t

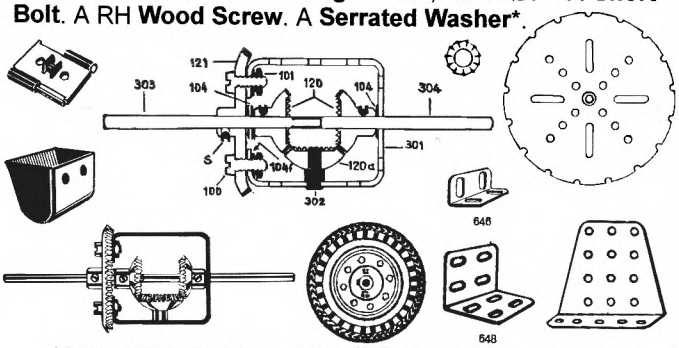
Pinion with a 17mm long face, a 26t Pinion; 50* & 64t Gears; 13 & 36t* Helicals; a Ratchet Wheel* (shown with 15 teeth but a 1973 one has 11). • An **Eccentric*** with strokes of about 16 & 9mm. • 30 & 50mm **Axles**. • 4h wide **Braced Girders**, 8,16*,24,32h long.

1964 New parts by this time were: • The **Flanged Corner Brackets**, 25a*,b*; the **Girder Brackets**, 26a*,b*, 27b*; • A (7h type) **Trunnion***. • **Flanged** (on one edge) **Braced Girders**, 8,16*,24,32h long. • An 11t **Pinion**. A 136t **Gear***. A **Rack Strip*** to be used with the Sprockets. • A 90mm **Pulley***. An 18/26/35mm solid brass **Cone Pulley**. • A 50mm **Flanged Wheel** (see later). • A 58mm Ø **Roller Plate***. • A 39mm **Circular Saw** & 40mm **Emery Wheel**, with a **Threaded Arbour*** to mount them on. • A **Winch Drum***. A **Handle Crank***. A shaped **Double Arm Crank*** spanning 4 holes (the only way to get a centre hole across the 4h wide parts). A **Cam***. A **Handrail Support**. A **Buffer*** (with a tapped mounting hole). A **Hinge***. A formed **Handle***. A 12mm Ø **3-Hole Collar**. A **Nut Holder***. A ribbed plastic handled **Screwdriver**, as well as the normal smooth handled one. A **Hand Wheel*** in plain cast zinc, 49mm o.d.



The **Chimney** was no longer listed. The 5*8h **Flexible Plate** was by then plastic & available in red, green, & clear.

1972 (& 1973) New parts: • 1*2*1 **Z-section Girders** (8,11,16,24,32h long). 5 & 7h lengths of **Double Strip & A/G**. • 7*11 & 7*16h **Perf. Plates**. **Sector Plates**, 5 & 7h long, Flat & Flanged* at the 5h end. **Girder Brackets***, #646 & 648, with all holes slotted. • A 64t **Contrate**. A **LH Worm**. A 44t **Sprocket** (perforated like the 136t Gear. • 3 & 5h nylon **Bearing Strips**, 3mm thick (very necessary with aluminium parts but most useful in any system); • A **Single Arm Crank**; • A kit of 16 parts to make up into a **Differential***, with special male/female ended Half Shafts, and a bent-up Strip cage bolted to a 64t Bevel. The Bevels are standard parts except that the lower small one has no boss. • 30,45,60cm **Rubber Driving Bands**, 4mm Ø. • A **Short Bolt**. A RH **Wood Screw**. A **Serrated Washer***.

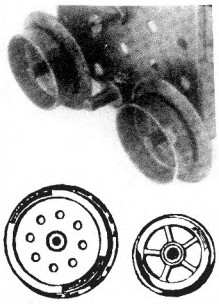


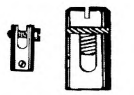
1979, 1980 & 1981 The additions were • A 1*2*1h **DAS**; • a 76mm **Road Wheel*** complete with tyre (replacing the Tyre for the 60mm Pulley). • The red plastic **Track Link***, & 34mm wide, yellow plastic **Dredger Bucket*** which could be bolted to it, plus (in 1981 only) a 112mm Ø **Track Wheel***. • **38 & 76t Gear Wheels**. By 1980, & perhaps earlier, the 50 & 64t Gears had been changed to 52 & 66t. • A 15*15cm **Design Table** & **Sheets of Paper** for it. • A **Potter's Wheel** (90mm Ø brass disc with a boss soldered to it), & **Clay** (1kg) to use with it.

The smooth handled **Screwdriver** was dropped.

Actual 1946, 1949, 1973, & Later Parts

• At about .030", the web of the 1946 **Strips** is between the values given in 8/197 (.021 & .036" for '49 & '73). • The 1946 **A/Gs** have round holes in both flanges and are made from the Double Strips. Both have corners which are not fully radiused. Later A/Gs have 7mm slotted holes in one flange. • The **A/B, Double Bracket, & Reversed A/B** are made of flat strip, and are not anodised in '46. All the other 'strip' Brackets, and the DAS, are made from the standard Strip material with raised edges. • The slotted holes in the **Angle Bracket** are 5.3mm long in '46, but 6.6mm by 1973. • The **Double Bent Strip** was 18mm high in 1948 but 15mm in 1973 - the slotted end holes allow both to span 3 holes. • The 5 flat **Joint Plates & Corner Brackets** (#25-29) are shiny aluminium in '46/'49, not the more matt anodised finish of most STOKYS parts. • The 1946 fibre **Flexible Plates** in the No.2 Set are grey, those in the 2a, dull blue, and those in 1949, dull green. • In 1946 the 20, 35 & 60mm **Pulleys** (actually 19, 33 & 58mm o.d.) are plain aluminium with brass bosses (aluminium on the 20mm). In 1949 the 20 & 35mm are all brass (the 60mm isn't in the No.1 Set). Later ones are aluminium. • The **Cone Pulley** is similar to the MECCANO pattern but sized 35/26/18mm o.d. & with a normal diameter boss. One from after 1973 has a deep recess in the boss face. • One 1946 **Bush Wheel** is aluminium, and one, like the 1949 example, is brass. Later ones are aluminium. • **Colour anodising**. From the mid-1960s, or before, 35 & 60mm Pulleys have been anodised red, & the Bush Wheel, Face Plate, & the discs of the Winding Drum, blue. It isn't known if any other parts were ever coloured. • The original **Flanged Wheel*** (right in the photo), was made from 2 plain aluminium pieces, with one of the 33mm Ø Pulley discs held by the boss to a 'bowl', 24½mm Ø & 7mm deep. By 1950 this part had been replaced by a boss riveted to a single brass pressing with 5 impressed 'spokes'*. The o.d. is 28mm & the tread 24½mm. The other Flanged Wheels are similar but without the spokes, and have treads of 20 & 50mm* Ø. • **Bosses** are brass, 9.0mm Ø, double-tapped, with recessed peening. (Very occasionally aluminium ones are found.) Originally they were a snug fit on the Axles but from sometime in the later-1970s the bore of some, if not all, Gears, and perhaps other parts, was made slightly larger to (just) fit MECCANO Axles. • In 1980 the design of the **Big End** was changed & both types are shown right, though the drawings don't match the known parts. Both have a longitudinal bore for the con rod at the lower end. In the first type the crank passes under the cross Bolt, & below this Bolt, & parallel to it, are a smooth & a tapped cross bore, the latter as shown, but normal to it. In the second the crank is under the special, longitudinal M6 Screw, and there are tapped cross bores, parallel to one another, top & bottom (the base is deeper than shown). As in the first version the top tapped bore allows the part to be used as a Strip Coupling. • The **Handrail Support** was also modified at this time to have both cross bores smooth & a vertical tapped bore through the top. • **Gears**. The 26t Pinion, and the 38 & 40t Gears have riveted bosses. The face widths of the 25, 40, 38t (& 76t) are 4, 3, 2mm respectively, & the 40t has a shallow recess in its outside face. The 38t Gear is stamped 201, & the 76t, 202. The 40t, normally brass, was aluminium with a brass boss in 1973. • The **Roller Chain** works well but tends to run off the Sprockets unless they are precisely adjusted. To change its length involves removing a pin, by filing or grinding, & riveting (hammering) over one of the new ones provided with each length of Chain. • Unlike latter examples, the 1946 **Axles**, **Crank Handle, & Crankshaft** are not nickeled, & their sheared ends are not rounded at all. All are 4mm Ø. The **Threaded**





Pin is steel, & in 1946 it too was not plated, & at 25mm o/a is 3mm longer than some, but not all, later ones.

• The **Double Bearing Bracket** is plain cast zinc. One found with the 1946 Sets corresponds to illustrations* through 1950, but by 1965 a more versatile version* is shown with an extra boss in the sides. The earlier one has 3*2 holes in the base, & 3 holes in each side - their pitch is roughly 5% more than the ½ & 1" that would be expected. Possibly this is due to metal deterioration, evinced by some cracking & distortion. • The **Ball Bearing Flanged Disc** is chemically blackened steel; its boss aluminium in 1946, but brass in 1973. • As late as 1950 illustrations of the Double Arm Crank show what appears to be raised edges on the strip part; however those in the 1946 Sets have the normal flat brass strip. • The **Buffer**, usually brass, was aluminium in 1973. • The 1973 **Hinge** is nickeled. • The **Loaded Hook** is plain cast lead. • **Bolt** heads are 5.5mm Ø, with cheeseheads in '46/'49 & tapered cheeseheads in 1973. The standard Bolt is 7.0-7.3mm u/h, & the Short one 6mm in 1973. Long Bolts are 15mm u/h in '46, but 18mm by 1949. All these parts are brass except that in the 1946 No.2 some of the Long Bolts, & a few Nuts, were plain steel. The hex **Nut** is 7.0mm A/F, & 2.5mm thick; the **Washer** is aluminium, 10mm Ø & 1mm thick. A wire **Screwdriver** was in the 1946 No.2 but this type is not in any of the literature. • Nickeled steel Pawls are known, likewise the strip part of Cranks. Both are probably from after 1973.

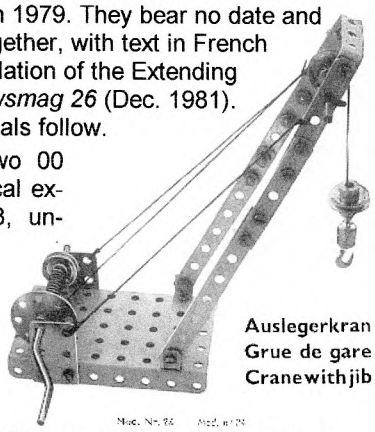
Motors 3 versions of both an Electric and a Spring Motors were available at different times. The former were 20v, 20 watt with one stage of reduction gearing included between the (aluminium) sideplates, and an external, round reversing switch. The 2 main types are shown below and are the same apart from the flanged sideplates of the M1 & the flat ones used in the M2. In some illustrations, and in actual Motors seen, the armature shaft doesn't extend beyond the end of the bearing, but in any case it is of substandard diameter. The third, the M10 was the same as the M1 but with a 1.2m remote control cable (#550). The M1 & M2 were introduced in 1947, the M10 about 1970. The 43mm o.d. gear on the output shaft of a Motor to hand is white plastic with fine pitch teeth & 8 face holes. The output shaft bearings in this Motor are brass but those for the armature are nylon within a brass outer casing. Felt sleeves for the armature bearings are referred to in a leaflet for an earlier Motor.

In 1947 there were 20 watt Transformers TF20 (with 8,12 & 20v output sockets), & TSM20 (with a stud rheostat). By 1949 only the TF20 was shown, and its shape was different with the output sockets on top. By 1967 the 30 watt TR 30, with a 3-spoke hand wheel on top to vary the output, had replaced it.

Also introduced in 1947 was the F2 Spring Motor (between the M1 & M2), and by 1950 the F1 Motor had been added. In 1967-71 the F0 & F1, but not the F2, were listed, and by 1979 only the F1. The (nickeled steel) sideplates varied slightly in detail one to another, but all were about the same size, 3½*4¾", and probably the same basic innards were used in each version. The 3 levers on the F2 are for reversing, changing speed between the 2 output shafts, & stop/start. The F1 was single speed, without the top shaft & speed change lever, while the F0 had no reverse, and only the stop/start lever. My F1 is beautifully made and the drive train gears are of standard DP, but at 1", it is wider than the MECCANO No.2, and the spring doesn't store as much energy.

MANUALS & MODELS 5 separate manuals were issued, for Sets 00; 0-2; 3-4; G1/G2; & K1, and details of all known versions are given in App.2. All are 224*154mm deep. Most have an Edition (Auflage) No. on the IFC, and in the later ones it is usually followed by a date. The 1946 manuals are known with the text in German/French/Italian & English/Spanish/Swedish, but most later ones are German/French/English. The page numbering starts at '73' in the 'Log Saw' Gear manuals, and '101' in all the 3-4 ones. Model Nos. start at 1,51,101,201,301,401 for Sets 00-4; K1 in the Bridge manuals; & 800 for the Gear models. Typically there are 20 to 25 models for each of the standard sets, but 40 or more for Set 1. All models are shown as B&W halftones, with a list of the parts needed (except for the 00 models), & sometimes some brief explanatory notes. The photos are often rather dark and don't convey well the 'light' appearance of the actual models, particularly in some of the manuals which are printed on poorer quality paper.

The 5 Leaflets for the **Special Models**, Nr.2201-5, were not listed in 1973 but were in 1979. They bear no date and are on A4 sheets stapled together, with text in French & German. An English translation of the Extending Tower Crane is given in *Newsmag 26* (Dec. 1981).


Auslegerkran
Grue de gare
Cranewithjib

More details of the manuals follow.

00 Manuals Only two 00 manuals to hand are identical except that one is Edition 8, undated, & the other Ed.9 of 9.68. They are on light yellow paper and their '2 Model' cover has not been seen on any other manual. Models are based on the 5*8h Flanged Plate, using Strips, the 4x 20mm Pulleys (no Tyres), & a Bush Wheel. Some are simple Hand Trucks & Barrows; others include a Trip Hammer, Railway Signals, & the Crane above.

0-2 Manuals The 'Log Saw' (6th Ed. 1946), '7 Model' (11th Ed. '49), & 'Digger' (25th, 26th, 27th Ed., '66, '70, '74) all differ from one another, with 20% more models in the '7 Model', and then in the 'Digger', 25% of the '7 Model' models were replaced by new ones, and another 50% were modified to a greater or lesser extent, all in round figures of course.

The **1946** manual contains a wide range of models, with many simple mechanical items, a number of Machine Tools & Cranes, and some railway equipment including Signals, several Bridges, a Level Crossing & various Wagons. Not many road vehicles feature, and the 20mm wheels of those shown look too small, even when in later years they had Tyres fitted. Of the rest, two simple Fairground Rides, Weighing Scales, a Biplane, a Conveyor, a Waterwheel driving a pump, and a few domestic items catch the eye.

The main mechanical features are a Pawl, or simple brake, fitted to most of the Cranes; the Crankshaft used to give reciprocating motion in some models; and centre pivot steering in several of the vehicles.

One noticeable thing, true of all STOKYS models, is that bending parts is only necessary in a very few cases, and then only to a degree which would be easily achievable with aluminium parts. In a few models card has to be used for roofs, etc.

Attractive among the new models in **1949** are a small Tramcar, an Excavator, a Tower Crane, and a Jeep.

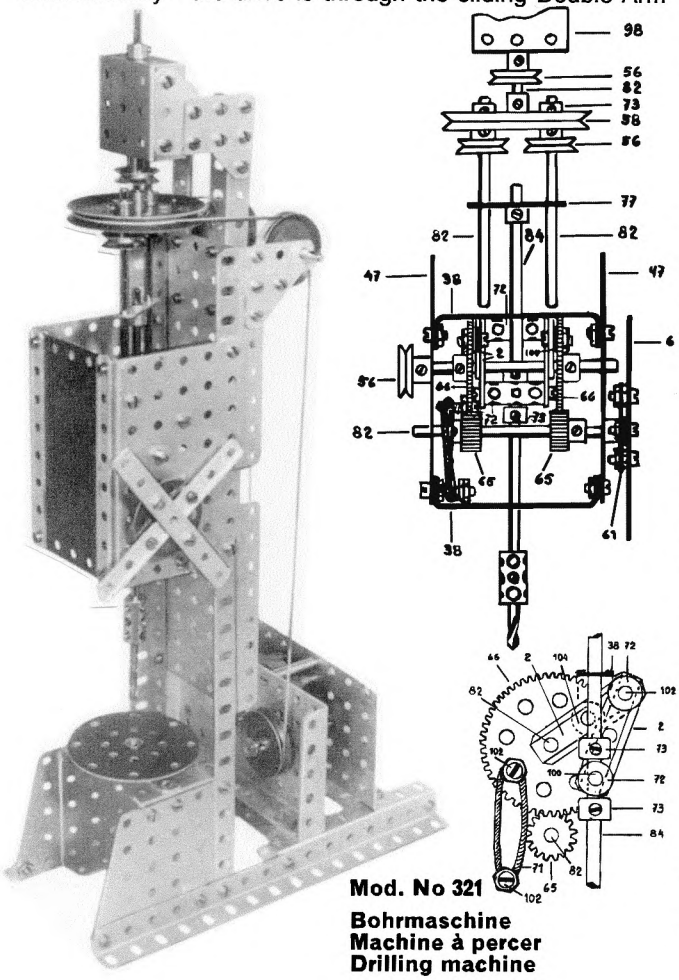
By **1966** the changes made had improved many of the models, often considerably, and new ones of note are a Lorry with 'proper' steering (though with negative Ackermann geometry), a Car Hoist, and a Rocket Launcher which elevates, and fires a made-up rocket thanks to 3x 80mm lengths of Spring Cord.

3-4 Manuals Here again there were changes between the 'Log Saw' (3rd Ed. 1946), the '7 Model' (8th Ed. 1949), the 'Digger' (14th Ed. 1965), & the next 'Digger' (15th Ed. 1969). There were 25% new models in the 8th Ed., but only a handful thereafter, though a lot were modified, to give changes in 50% of the 1949 models by the 14th Ed., and another 25% by the 15th. A 1978, 16th Ed. 'Log Saw' manual has the same models are the 15th.

No.3 Models In **1946** these include 6 braced, girder Bridges, quite nice but all about 2ft long and rather similar; and some attractive railway items: a Tank Wagon, a twin bogie Timber Wagon, and 2 Snow Ploughs. Other good models are an open-sided Tramcar, a Trolley Bus, a Fire Engine with extending ladder, and a splendidly complicated looking Concrete Mixing Plant.

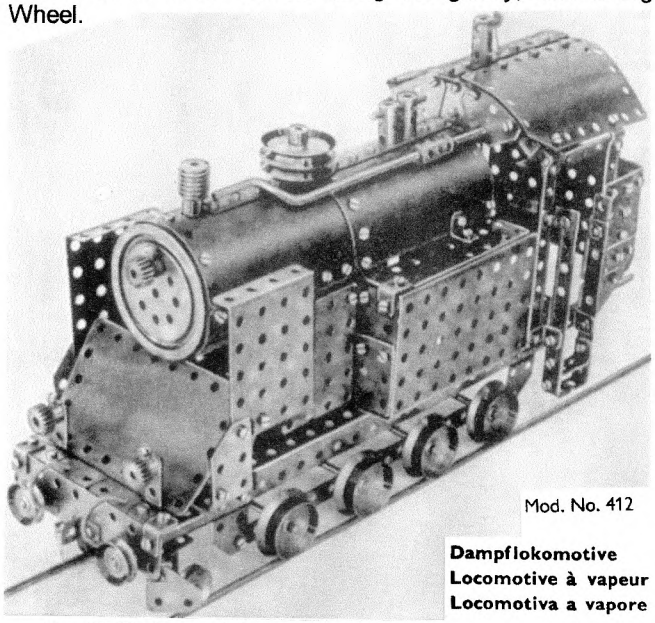
By **1949** two of the Bridges are gone, and the new models include an attractive fully enclosed Tramcar, a fairly standard small, treadle Sewing Machine, and another nice Crane (but none of the Cranes so far luff or have a crab, although several, like this one, have a slewing drive).

Later models include the Boring Machine below, the first powered model, and one of the more complicated ones mechanically - the drive is through the sliding Double Arm Crank, 77, with a Spring Cord return, 71, on the up & down movement. Others models are a Radar Dish, and a good size Breakdown Lorry with 35mm Pulleys with Tyres for wheels, a luffing jib (and correct Ackermann geometry).



Mod. No 321
Bohrmaschine
Machine à percer
Drilling machine

No.4 Set Models Again a wide range, and in **1946** they include a Steam Roller, 5 more (longer) girder Bridges, a larger Excavator, a Tipping Lorry, a good Travelling Gantry Crane, the Loco below, various Towers, a Gantry Crane with a crane which travels along the gantry, and a Big Wheel.



Mod. No. 412
Dampflokomotive
Locomotive à vapeur
Locomotiva a vapore

By **1949** four of the Bridges have gone, and also the Loco (possibly because the Flanged Wheels, already on the small side, had by that time been redesigned and made even smaller). New models include a Fire Engine with extending ladder, a Pile Driver, a Coaling Plant, and a twin unit articulated Streamlined Train, in which the sides & roof are mostly open frameworks where the original was glazed, and it doesn't look the part, not on paper anyway. The Tipping Lorry has been reworked, and looks much better.

1965 sees a much improved version of the earlier Chair-O-Planes, and the Gantry with Crane has been redesigned too, but has lost its luffing motion, formerly by a Screwed Rod through a tapped hole in a Coupling. The Big Wheel has been improved too and fitted with the M1 Motor. (This & the No.3 Boring Machine were the only motorised models, and no manual model driven by a Spring Motor has been seen.) The only completely new model in this Edition is a Trolley Bus with steering linked to the trolley arms.

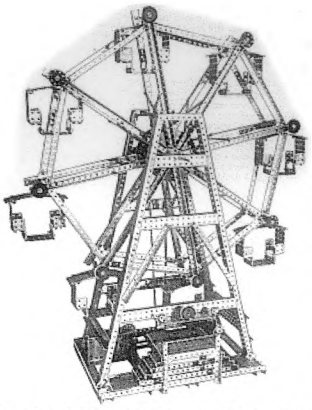
In the next **1969** Edition, the Tipping Lorry has been given a more modern bonnet, and the Steam Roller greatly improved with built-up, larger rear wheels (though the rim had to be rolled from Double Strips). The 2 new models are Platform Scales, & an attractive Railway Breakdown Crane.

Special Models The models that could be made from Set 4 were constrained by its limited size, and the relatively small range of parts it contained. The Special Models though not spectacularly large, used parts from the whole system, as needed. The Crane & Lorry are shown on the back cover of this Issue.

The **Extending Tower Crane**, Nr.2201, has a 16" section of the tower sliding within the 12" high base, hauled up by cords from winches on either side of the base. All movements, including luffing & slewing are manually operated through simple gearing.

Nr.2203 is the **Designing Machine**, and looks to be typical of the genre, although the frame made largely of Channel Girders looks both rigid and neat. It can be operated manually or fitted with an M1 or M2 Motor. The patterns are 14cm Ø and 8 are shown, together with a table of the Gears needed to achieve them.

Nr.2204, a **Potter's Wheel**, is just a special disc driven from the M1 Motor with a suitable reduction. The instruc-



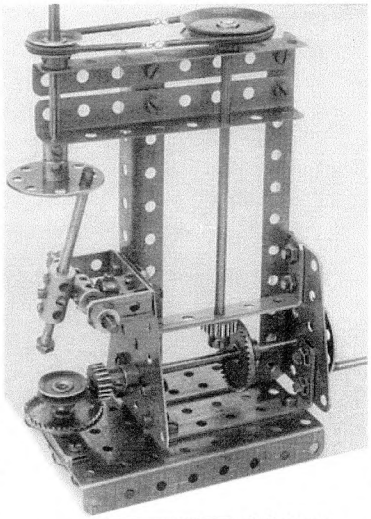
tions tell how to make articles using the Clay (PN 216, 1kg). Sounds rather fun, and a first for Stokys as far as I know.

Nr.2202 (left), the **Big Wheel**, stands some 3ft high & the 'A' frames are made of Channel Girders. Over 500 N&B are used, and it is driven by the M1 Motor with a chain drive to the centre shaft.

The final model is the nice looking, 18" long **Skip Lorry**, Nr.2205. The skip frame is swung by rods which are operated by an M1 Motor mounted behind the cab. At the same time a linkage from each side of the bottom of the frame, lowers supporting jacks while the skip is outboard. The jacks are Rods with 20mm Pulleys at the end and can just be seen in the photo. Those are the only mechanical feature apart from the steering, and the hinged doors (which don't seem to have handles to keep them closed).

To show what could ultimately be achieved, Felix Stockmann, head of Stokys, wrote some notes, with photos, in *Newsmag 24* (Aug. 1981) on a model **Escalator** he had built (he had once worked for the Otis Elevator Co.). It is 1.8m long. .9m high, has 29 steps, and contained 1860 parts plus 4280 N&B.

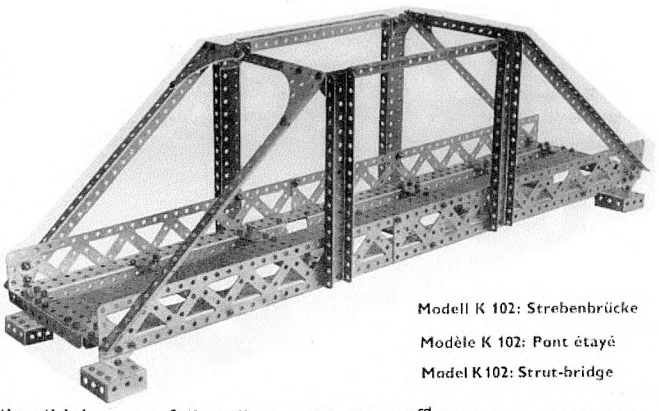
G1-G2 Manuals The 1964, 11th Ed. 'Digger' has identical models to the 1946, 3rd Ed. 'Log Saw', with 13 for G1 & 3 for G2. All these are in the 12th Ed. 'Digger' (undated), together with an extra 7 G2 models. In this manual all the models are numbered consecutively from No.801; in the earlier ones the G1 models start from 801 & the G2 are Nos.901, 950, & 990. A 13th Ed. 'Digger', again undated, is identical to the 12th.



All the G1 models need parts from Set 0, & include the usual range of small mechanisms - reversing, automatic reversing, 2-speed Gearbox, Differential, etc - plus a Speed Indicator, 3 experiments with levers & pulleys, and (right) a Mixing Machine mechanism. The larger sets are needed for the G2 models & the 3 in the earlier manuals are a 3-Speed Gearbox with a separate reversing stage, a Loco Valve Gear demonstration model, and a horizontal twin-cylinder Marine Engine with variable valve gear. The additional models in the 12th Edition include a Ratchet Feed, a Maltese Cross mechanism; a Band Brake; a double-acting Shoe Brake; and a Coupling with 2 Face Plates connected by 4x 2h Strips in the plane of the discs, in effect an Oldham coupling, with provision to demonstrate the action by displacing one shaft while keeping it parallel to the other.

K1 Manuals The '7 Model' 3rd Ed. (1972) has one more model than the 9 in an earlier, unreferenced '7 Model' one; a 4th Ed. 'Digger' (1979) has the same models as the 3rd.

The first 4 models are static bridges of various designs, maximum length 33" and wide enough 'for one 0-gauge line or for 2 or 3 lines for gauge 00 and WESA'. The one atop the next column is the nicest, and in some of the others the Braced Girders look a little ungainly, perhaps because of



the thickness of the diagonals. The 3rd Ed. has more detailed instructions for these 4 models, with different photos and minor changes, mainly to make them more rigid torsionally. They are followed by a Beam Bridge and a Lifting Bridge, both rather plain designs, and the beam is moved by a gear drive to its pivot axle. The extra model in the later edition is a quite attractive Railway Footbridge. The final 2 models are an Engine Shed & a Railway Station, both quite skeletal but with nice lines.

Thank You to David Hobson, and all who contributed material, including Josep Bernal, Toby Haffter, Peter Kessler, Ernst Leuthold, Harry Marïen, Werner Sticht, & Richard Symonds,

Appendix 1. Dates. 1946. David's Sets are judged to be from about 1946, in the first instance because the 6 figure PRs of the 3 Manuals with the Sets, all start with '46'. Two supporting facts are (a) the Sets contain many undisguised brass parts and so ought to be post-WW2 (see 13/335); and (b) the illustrated parts in the manuals show fewer parts than those in Leaflet which has been dated independently as 'about 1947'.

1945. A Leaflet was found with the 1946 Sets. It is in German, French & Italian, and is printed in orange & black on a sheet 25*47½cm, folded into 3. One side has an Introduction with photos of a selection of models, and on the back is a list of the sets available, with photos of all but the linking ones, and illustrations of some 75 parts. It is judged that this Leaflet was from before 1946 because fewer parts are shown in it than in the '1946' Manuals, and because it has been rubber stamped to say that the prices shown are no longer correct. The 1945 date is a guess and it is possible that it was printed earlier.

1947. The 'about 1947' Leaflet already mentioned is a photocopy, the same size as the 1945 one. The 'model' side of it is as before except that the languages are English, Spanish & Swedish, but new on the other side are the No.00 Set & about 10 more parts. The number of parts places it after the 1946 Manuals and before a Price List dated 1950, while the photo of the No.1 Set on it shows a slightly different layout to that of the actual '1949' No.1 (see below). So 1947 or 1948.

1949. The Illustrated Parts in the manuals with the No.1 Set show the same parts as the 1947 Leaflet but fewer than the 1950 List. Also the total number of parts in the Set, as given in the Manuals, is slightly greater than that in the 1947 Leaflet, and corresponds to the 1950 List. So the Set is after 1947 but equally could be after 1950, with the Manual not having 'kept up'. But there is a 'New larger contents' sticker on the box lid, and it has been assumed that this would mean a date within a year or two of the change of content. So 1949 seems a fair guess.

1950 and Beyond. All dates used are from dated manuals or Lists, except that some 'possible' dates have been inferred from the number of parts in the sets, which varied very slightly over the years, and is usually given on the dated Price Lists.

Appendix 2. The Manuals. Details which remain the

same from one Summary to another are not repeated. English names are given where English was one of the languages used.

SUMMARY OF '2 Model' 00 MANUAL •Name: STOKYS 00. •Details of maker: Gebr. Stockmann AG, Luzern. •Dates &/or Ref Nos: Nr.1000 on FC; 9.Auflage - 9.68 on BC. •Page size: 225*155mm deep. •No. of pages: 8+covers. •Language: German/French/English. •Printing: B&W photos on yellow paper, inc cover. •No Parts List or Set Contents. •Sets covered: 00. •No. of models: 24. •Name, Model No., Page No. of first & last model: 4-Wheel Trolley (not named),1,IFC; Crane with jib, 24,8. •Other notes: •3 models from Sets 0-2 are on IBC, & 10 larger ones on BC. •The first 7 models on the IFC & p1 are unnamed. •Another manual is identical but has 8.Auflage on IFC, with no date.

SUMMARY OF 'Log Saw' 0-2 MANUAL •Name: STOKYS 0-2. •Dates &/or Ref Nos: none. •No. of pages: 48+ covers. •Language: English/ Spanish/Swedish. •Printing: B&W photos, inc model on yellow cover panel. •Page No. of Ill. Parts & highest PN: 47,142. •Page Nos. of Set Contents &. highest PN: 48-IBC,110 (1008 for manuals). •Sets covered: 0,1,2. •No. of models for each set: 25,40,20. •Name, Model No., Page No. of first & last model of each set: 0: Three-armed signpost,51, 5; Hose-wagon,75,13. 1: Drilling machine,101,14; Dieselmotor,140,29. 2: Electric railway bell signal,201,30; Electric railway tractor,220,42. •Other notes: •Gear ratios & std. constructions on pp2-4; pp43,44,46 have 2 No.3, a No.4, & 2 G1 models; 11 others are on the BC. •An ad for electric motors & transfos is on p44. •An identical manual in German/French/Italian has 6.Auflage on IFC, & 461059 on BC.

SUMMARY OF 'Log Saw' 3-4 MANUAL •Name: STOKYS 3-4. •Dates &/or Ref Nos: none. •No. of pages: 42 (pp101-142)+covers. •Printing: B&W photos, inc model on blue cover panel. •Page No. of Ill.Parts & highest PN: 117,142. •Page Nos. of Set Contents & highest PN: 142-IBC,110 (1008 for manuals). •Sets covered: 3,4. •No. of models for each set: 19,24. •Name, Model No., Page No. of first & last model of each set: 3: Gangway,301,102; Small crane,319,116. 4: Steam roller, 401,118; Building crane.421,140-141. •Other notes: •Some models are out of order; No.424, High metal bridge, is on p137. •11 models are on the BC. •An identical manual in German/French/Italian has 3.Auflage on IFC, & 461059 on BC.

SUMMARY OF '7 Model' 0-2 MANUAL •Name: STOKYS 0-2. •Dates &/or Ref Nos: 11.Auflage on IFC. •No. of pages: 58+covers. •Language: German/French/Italian. •Printing: B&W photos of Models, colour cover. •Page No. of Ill. Parts & highest PN: 57,142. •Page Nos. of Set Contents & highest PN: 58-IBC,110 (1008 for manuals). •Sets covered: 0,1,2. •No. of models for each set: 31,47,25. •Name, Model No., Page No. of first & last model of each set: 0: Dreiarmiger Weg+ weiser,51,5; Flugzeug,81,16. 1: Lastwagenanhänger,141,16; Planier+ maschine,147,36. 2: Streckenläutwerk,201,37; Jeep mit Anhänger, 226,53. •Other notes: •No.141 is out of order; No.101 (Bohrmaschine) is on p17. There is no No.217. •Gear ratios & std. constructions on pp2-4; pp54,56 have 2 No.3, & 2 G1 models; 11 others are on the BC. •An ad for electric motors & transfos is on p55.

SUMMARY OF '7 Model' 3-4 MANUAL •Name: STOKYS 3-4. •Dates &/or Ref Nos: Nr.1034 on FC; 8.Auflage on IFC. •No. of pages: 46 (101-146)+covers. •Language: German/French/English. •Page No. of Ill. Parts & highest PN: 119,142. •Page Nos. of Set Contents & highest PN: 146-IBC,110 (1008 for manuals). •Sets covered: 3,4. •No. of models for each set: 21,21. •Name, Model No., Page No. of first & last model of each set: 3: Gangway,301,102; Sewing machine,321,118. 4: Steam roller,401,120; Pile driving machine,421,145. •Other notes: •11 models on the BC.

SUMMARY OF 'Digger' 0-2 MANUAL •Name: STOKYS 0-2. •Dates &/or Ref Nos: Nr.1002 on FC; 25.Auflage 9.66 on IFC. •No. of pages: 60+covers. •Printing: B&W photos of Models, colour cover with yellow bottom panel. •Page Nos. of Ill. Parts & highest PN: 58-59,157. •Page Nos. of Set Contents & highest PN: 60-IBC,110 (1100 for manuals). •Sets covered: 0,1,2. •No. of models for each set: 82,43,25. •Name, Model No., Page No. of first & last model of each set: 0: Elevator,51,5; Aeroplane,82,16. 1: Drilling machine,101,17; Levelling machine,147, 36. 2: Electric railway bell signal,201,37; Launching platform,227,54. •Other notes: •There are no Nos.110,111,119,130,141,206,217, & 2 of 136. •Gear ratios & std. constructions on pp2-4; pp55,57 have 2 No.3, & 2 G1 models. •An ad for electric motors & transfos is on p55. •Editions, Nr.1002, 26. 7.70, & 27. 8.74 are identical to this manual.

SUMMARY OF 'Digger' 3-4 MANUAL, 14.Auflage •Name: STOKYS 3-4. •Dates &/or Ref Nos: Nr.1034 on FC; 14.Auflage 9.65 on IFC. •No. of pages: 48 (101-148)+covers. •Printing: B&W photos of Models, colour cover with blue bottom panel. •Page Nos. of Ill. Parts & highest PN: 120-121,157. •Page Nos. of Set Contents & highest PN: 148-IBC,110 (1024 for manuals). •Sets covered: 3,4. •No. of models for each set: 22,21. •Name, Model No., Page No. of first & last model of each set: 3: Gangway,301,102; Break-down Truck,322,119. 4: Steam roller,401,122; Pile driving machine,421,147. •Other notes: •No.313 is labelled 113.

SUMMARY OF 'Digger' 3-4 MANUAL, 15.Auflage •Name: STOKYS 3-4. •Dates &/or Ref Nos: 15.Auflage 10.69 on IFC. •No. of pages: 56 (101-156)+covers. •Page Nos. of Ill. Parts & highest PN: 124-125,157. •Page Nos. of Set Contents & highest PN: 156-IBC,110 (1100 for manuals). •Sets covered: 3,4. •No. of models for each set: 24,19. •Name, Model No., Page No. of first & last model of each set: 3: Gangway,301,105; Tank wagon,324,126. 4: Platform car,401,127; Platform scale,419,153-5. •Other notes: •Gear ratios & std. constructions on pp102-4. •Edition 16. 9.78 is identical to this manual.

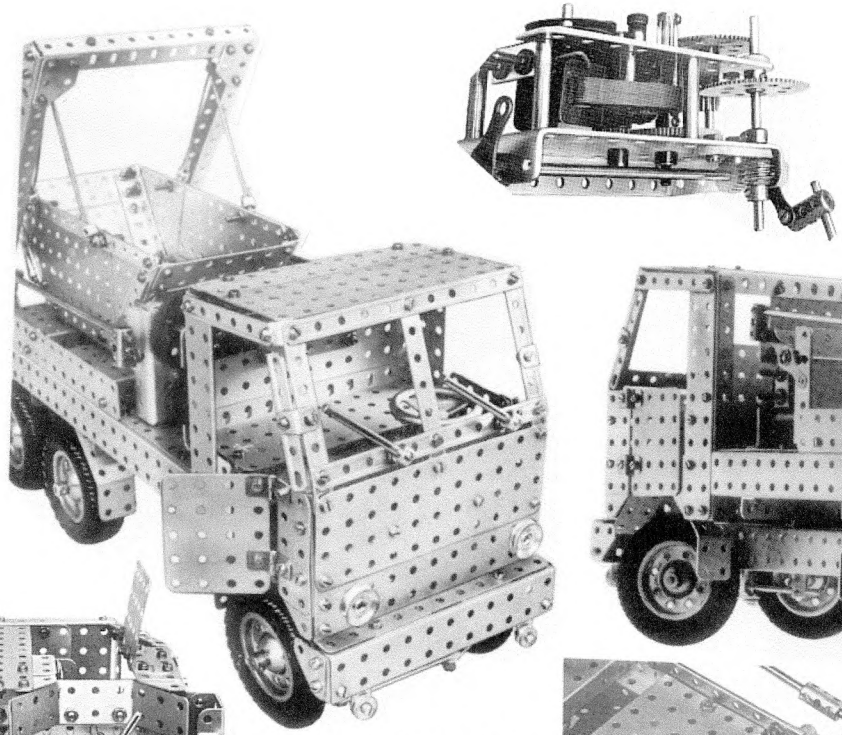
SUMMARY OF 'Log Saw' Gear MANUAL •Name: STOKYS Gear and Experimental Box. •Dates &/or Ref Nos: none. •No. of pages: 20 (73-92)+covers. •Language: English/Spanish/Swedish. •Printing: B&W photos, inc model on red cover panel. •Page No. of Ill. Parts & highest PN: IBC,142. •No Set Contents. •Sets covered: G1,G2. •No. of models for each set: 13,3. •Name, Model No., Page No. of first & last model of each set: G1: Inversion gear,801,76; Mixing machine,813,85. G2: Three-speed gear with forward and backward running, 901,87; Model of a marine steam engine,990,91. •Other notes: •The G1 models need Set 0 parts, & the G2, Set 2,3 or 4. •2 other G2 mechanisms are on p86. •Gear ratios & std. constructions on pp73-75; an ad for electric motors & transfos on p92; BC has 11 other models. •An identical manual in German/French/Italian has 3.Auflage on IFC, & 461059 on BC.

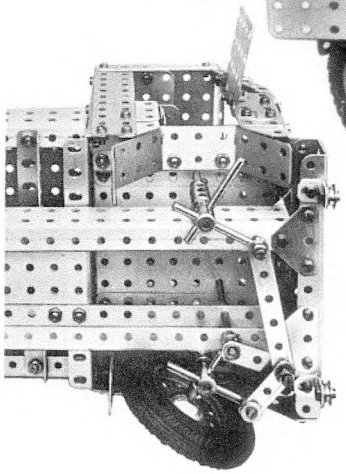
SUMMARY OF 'Digger' G1/G2 MANUAL, 11.Auflage •Name: STOKYS G1/G2. •Dates &/or Ref Nos: Nr.1100 on FC; 11.Auflage 10.64 on IFC. •No. of pages: 22+covers. •Language: German/ French/Italian but the outside of the covers are in German/French/ English. •Printing: B&W model photos; colour cover with red bottom panel. •Page Nos. of Ill. Parts & highest PN: 22-IBC,157. •No Set Contents. •Sets covered: G1,G2. •No. of models for each set: 13,3. •Name, Model No., Page No. of first & last model of each set: G1: Umschaltgeriebe,801,4; Mischmaschine,813,13. G2: Dreigang-Getriebe mit Vor- und Rückwärtsgang,901,15; Modell einer Schiffs-Dampfmaschine,990,18-19. •Other notes: •The G1 models need Set 0 parts, & the G2, Set 2,3 or 4. •2 other G2 mechanisms are on p14. •Gear ratios & std. constructions on pp1-3. •An ad for electric motors & transfos is on p20, and for the K1 Set on p21. •The G1 & G2 models are as in the '7 Model' manual above.

SUMMARY OF 'Digger' G1/G2 MANUAL, 12.Auflage •Name: STOKYS G1/G2. •Dates &/or Ref Nos: Nr.1100 on FC; 12.Auflage on IFC. •No. of pages: 28+covers. •Language: German/French/English. •Page Nos. of Ill. Parts & highest PN: 28-IBC,157. •No Set Contents. •Sets covered: G1,G2. •No. of models for each set: 13,10. •Name, Model No., Page No. of first & last model of each set: G1: Inversion gear,801,4; Mixing machine,813,13. G2: Feeding device,814,14; Model of a marine steam engine,823,24-25. •Other notes: •The G1 models need Set 0 parts, & the G2, Set 2,3 or 4. •2 other G2 mechanisms are on p20. •Gear ratios & std. constructions on pp1-3. •An ad for electric motors & transfos is on p26, and for the K1 Set on p27. •The G1 models are as in the 11.Auflage manual above. •Edition 13 (undated) is identical to this manual.

SUMMARY OF '7 Model' K1 MANUAL •Name: STOKYS K1. •Dates &/or Ref Nos: none. •No. of pages: 8+covers. •Printing: B&W photos of models; colour cover. •No Parts List. •Page No. of Set Contents & highest PN: BC,154. •Sets covered: K1. •No. of models: 9. •Name, Model No., Page No. of first & last model: Low-bridge,K101,IFC; Railway Station,K132,IBC. •Other notes: •Model Nos. are 101-107, & 131-132.

SUMMARY OF '7 Model' K1 MANUAL, 3.Auflage •Dates &/or Ref Nos: 3.Auflage 5.72 on IFC. •No. of pages: 12+covers. •No. of models: 10. •Name, Model No., Page No. of first & last model: Low-bridge, K101,1; Railway Station,K132,IBC. •Other notes: •Model Nos. are 101-107, 130-132. •Slightly enlarged version of the manual above, with minor changes to some models, & Nos.103/104 interchanged. •The Set Contents on the BC has an extra '2x #22' parts squeezed in. •Edition 4. 7.79 is identical to this manual except that it has a 'Digger' cover (with green panel), & the '2x #22' parts are in their proper place on the BC.





Nr.2205 Wechsel-Lade-Kipper

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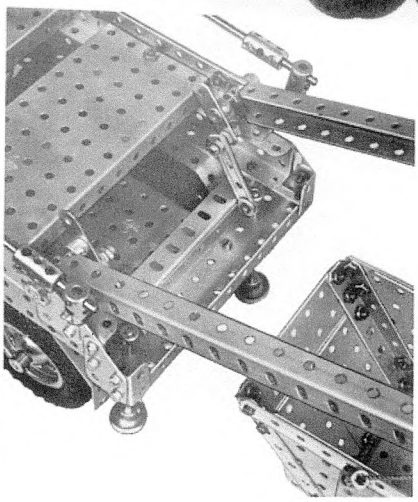
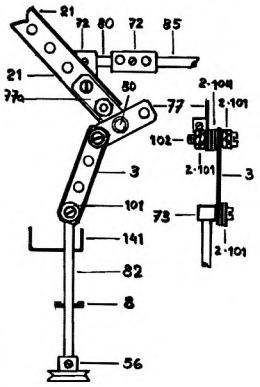
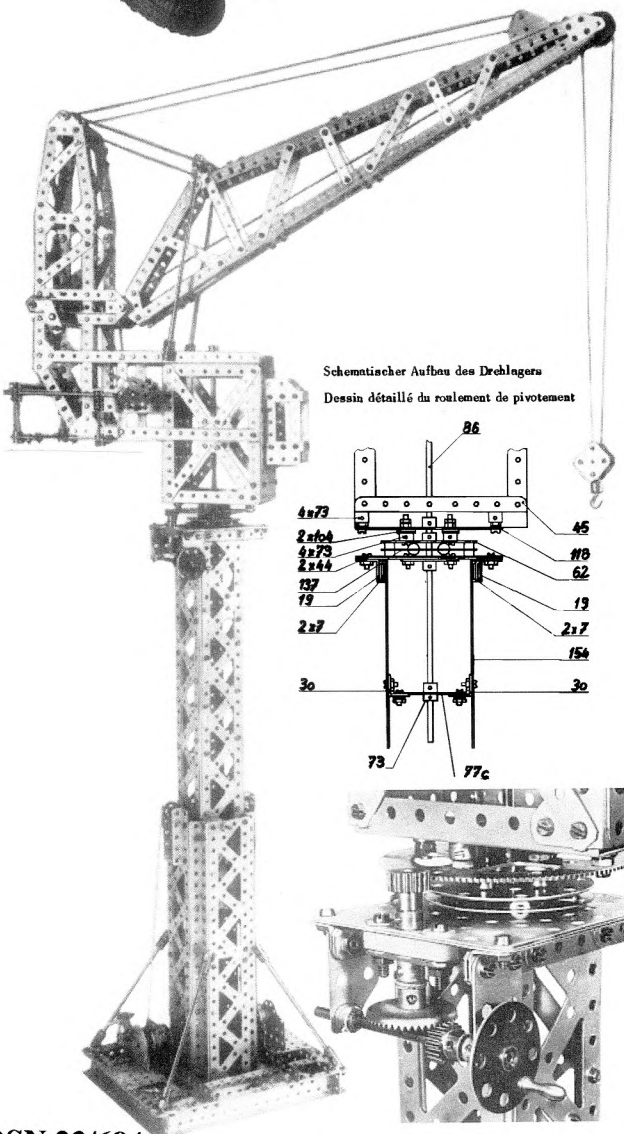
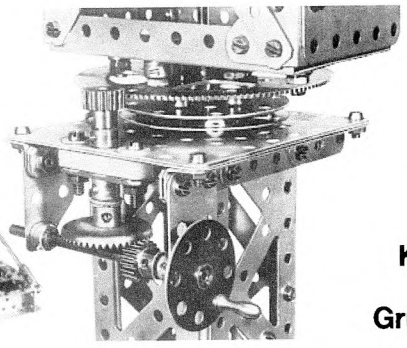




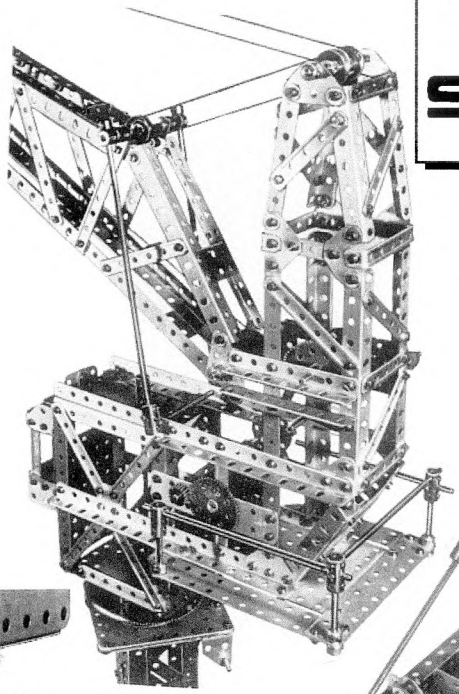


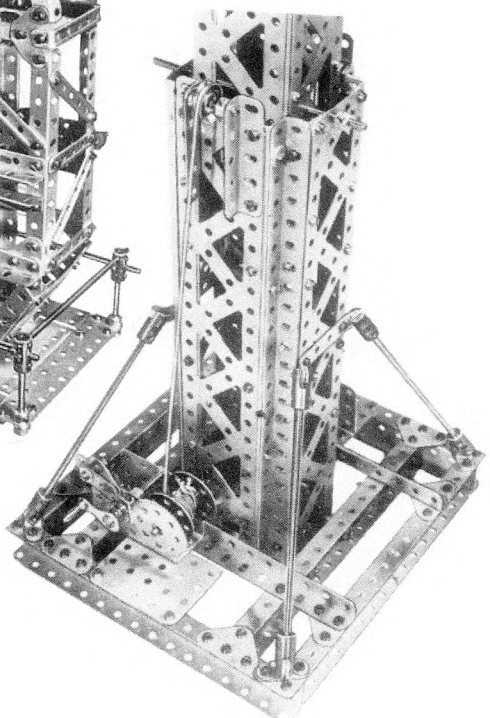
Schematischer Aufbau des Drehlagers

Dessin détaillé du roulement de pivotement



See pp668-675 for more on STOKYS





Nr.2201

Kletterkran

Grue extensible

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

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

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

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

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

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

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

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

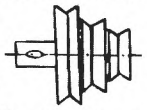
To continue the story, I now have, thanks to Werner, a **1998 Price List**, and it shows a few changes since the 96/97 one of OSN 16. On sets, a new one is **'Uhr 1'**, Wanduhr (Wall Clock) mit Quarzwerk, but no illustration unfortunately – it is said to be suitable for beginners and only costs FR.45, so no doubt it's a commercial quartz movement in a suitable framework. The set to make the **Designing Machine**, now numbered SM 06, has been reintroduced. Also there's a new **Battery Box**, SE 02, with forwards/reverse for the GM motors. The **ET Packs** of parts aren't mentioned.

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

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

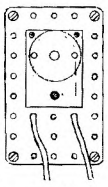
An even later **2000 Price List**, dated 1/9/99, kindly send by David Lawrence, has a few more changes. One set has gone, the supermodel **Skip Lorry outfit**, and one has been added, a simple **Jeep KP12** for beginners, but there's no illustration. The **Parts Packs** have been revised and now there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

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

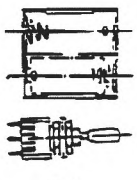


Deleted are the **A/B** with 2*2h in each arm, E12; the 1m long Motor connecting **Cable**, FS11; the **Remote Controller** for the Auto Set models, FS01. The **Curved Strip**, B01, is again not listed, so must be presumed lost – the only Curved Strip in the system, gone.

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



SE 02



SE 01

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

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

A.C.Gilberts's First ERECTOR Patent

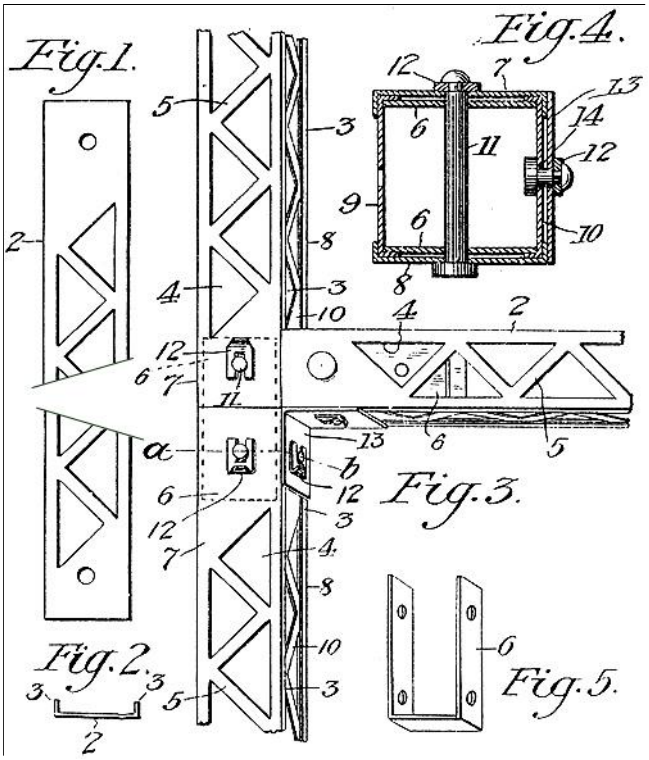
by David Hobson

Gilbert's first ERECTOR patent seems to have been US 1,066,809 of 8 July 1913, and is entitled 'Toy Construction Blocks'. Its specification is quite brief, and outlines how to make his famous box girder units from 4 strips having simple flanged edges, using U-shaped coupling pieces. (Strip is the term used in the patent for the ERECTOR 'braced' Girder.) This version was only marketed for the 1913-14 season, and Gilbert does not seem to have made application for an equivalent UK patent. For the next year the Girders were redesigned to have the familiar V-section channels along their edges, and four could then be made into a box girder without the use of a U-shaped coupling piece. This version was covered by US 1,231,728 issued in 1917, the application having been made on 26 Jan. 1914. The equivalent UK specification is No.1259 of 1915.

The figures from the patent (actually from a clearer, revised version described later) are shown right. The U-shaped coupling piece, 6, acts to hold the side strips 9 & 10 out against the lips of the other side strips 7 & 8, while the bolt, 11, presses 7 & 8 down onto the lips of 9 & 10. As shown the bolt 11 is a smooth pin with a groove near the end for a U-shaped retaining clip 12, but in the text is also '…or the bolt may be threaded and a nut applied thereto.'

In contemplating using the pin and clip method instead of bolts Gilbert may have thought it would be cheaper and offer an advantage over his competitors already established in the market – MECCANO, AMERICAN MODEL BUILDER, & STRUKTIRON. However the length of the pin had to be quite specific for the combination of strips & couplings to be joined and it could not be tightened to make a really firm joint. Packing washers might have helped in both cases but are not mentioned in the patent. Gilbert seems to have abandoned the idea of using this method of fastening and ordinary nuts & bolts were supplied in the 1913 sets. Bolts with nuts are shown holding the redesigned strips in US 1,231,728.

As already mentioned the first patent was quite brief, running to only 1 page of text. It seems to have been badly drafted, and included some obvious mistakes in the drawings. Although Gilbert soon abandoned the principles it covered, it was redrafted for some reason, with 3 pages of



text, and with the drawings amended to clarify the invention. This version was published as US Reissued Patent 14,250 of 16 Jan. 1917, the application for reissue having been filed on 29 Jan. 1914. Interestingly, although the U-shaped clip method of securing the pins is mentioned in the text as before, and is illustrated in the drawings, it is omitted from the Claims Section. By Jan. 1914 Gilbert must have abandoned the simple flanged strips covered by the patent, and had indeed just filed for patent protection of his redesigned version. Presumably therefore the reissue was for legal reasons, either at the instigation of the US Patent Office to correct mistakes, or because there might be a need to establish proper priority of the original patent in case it were to be used later, or in case of any disputes which might arise.

ITEMS FROM LETTERS

1. From Thomas Morzinck. 'Tobias Mey has told me that he is going to start a **toy museum** in the town of Calw [between Baden-Baden & Stuttgart] in which all his priceless originals will be shown in special exhibitions in 2003 & the following years. There will be special interest exhibitions for metal sets like Märklin, wooden sets like Record, stone sets like Anker and much more.'

2. From Werner Sticht. 'Bad news from Switzerland, the production & storage areas of **STOKYS** Littau factory burnt down in last March.' Werner also mentioned that he now has a web site, www.stabilbaukasten.de.vu, for STABIL and other Walther products. It's in German but much is easy to follow and the pictures often speak for themselves. As well as STABIL there are sections on MINIATUR, WALTHER'S INGENIEUR, and the wooden sets. Also notes on the pioneers including Lilienthal, Hornby & Korbuly.

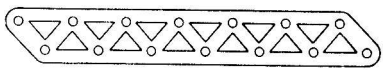
3. From Don Redmond. • All the Semi-circular Plates found in two strung **VOGUE** No.1 sets are the type with 2 extra holes, illustrated in 15/421. The extra holes are not shown anywhere in the manuals for the Sets. [Since Don wrote a No.2 set has been sold on eBay, boxed but not strung, and of the 6 Semi-circular Plates that should have been in the Set, 5 could be seen, and all were the type with the 2 extra holes. The Set was in no other way remarkable: the manual cover was identical to the one shown in 17/466, and the lid label similar, with SET No.2 (STANDARD) at bottom left, just as expected.]

• On the Chinese **MECHANIC** (17/471 & 22/640) I can confirm that the No.190 exists, and that the 190-192 series is not progressive. No maker's name is given on the 190, the only source information is on the (Canadian) bilingual box: 'Imported by/importé par DMD Group, Misssisauga (Ontario) L5T 1R2'. There is no French on the model sheet but a copyright date of 1993. The English model names are a little strange, Sailer for a sailboat for instance. Nice try though.

• 3 white Flanged Plates not seen before are sketched 50% full-size in the next column, and all the holes in them are indicated. The large cutout in the one top left is 30*35mm, and it has flanges on its short sides, with 5 holes in each. The top right one has 7h flanges on its long sides. The bottom Plate is 7*14cm and its flanges are at 45°. The long ones are unperforated and only 7mm wide; at the ends they are 20mm wide with 2 slotted holes in each as shown. The large holes on top are 10 & 33mm diameter. The clues to their probable identity came from their unusual hole pitch of 14mm, and the various labels stuck to them - most are 'space' but one is 'Delta-X'. So no doubt the parts are from a **DELTA-X Space Set**, not listed in MCS. [DELTA-X was the name used for the Japanese DELTAX sets when they were sold in the United States, see 11/288.]

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 length-ways 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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OTHER SYSTEMS NEWSLETTER

OSN 38 APRIL 2008

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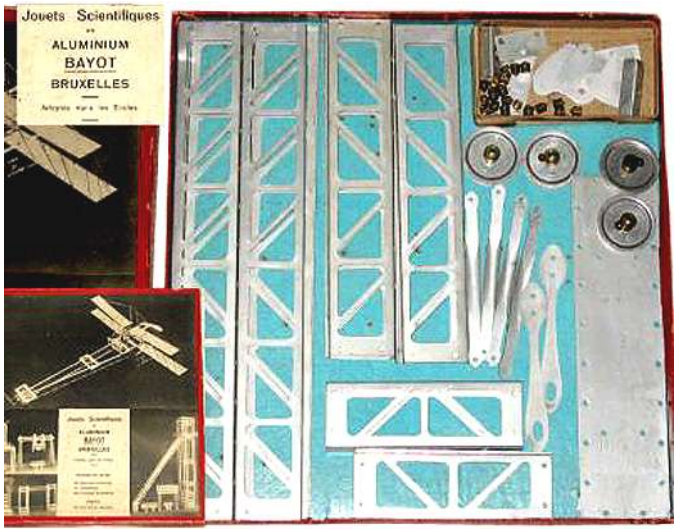
EDITORIAL Talking to a confirmed Meccanoman recently, we got on to the subject of how to get youngsters interested in MECCANO, or the like, and he felt strongly that remotely contr-olled Robots, preferably with a computer interface, were the way forward. A major player in this field is VEX, who promote competitive events, including a 'world championship'. Some notes on VEX were given in 34/1006 and since then a $200, simplified, 'almost ready to run' kit called Revell Vex Vexplorer has been introduced. I can see that such Robots could well have appeal and any constructional 'toy' that creates interest among the young, and not so young, is to be welcomed. Many would of course soon lose interest but that doesn't matter, it's the very few who get hooked, or return to the hobby in later years, who count. I would be interested to hear from any reader who has first hand knowledge of any of the VEX products, or of similar types of robotic kits.

Shorter NOTES, with thanks to all contributors.

1. Jeannot Butex wrote that Constructorama had found a 'new' French system called **JEU FAIT TOUT**. It dates from around 1935.

JEU FAIT TOUT: S1 [38/1132]

2. **Snippet. 'New' Belgian System: BAYOT** The photo below was taken from German Ebay but the set's maker was given as a company called Bayot of Brussels, and this is borne out by the label in the picture. It was also said that the parts are aluminium and that the box measures 28.5*29.5* 2cm. By scaling the pitch of the holes in the parts is between 22 & 23mm. To the left of the open box is what seems to be part of the lid, overlaid at the bottom by the manual. It's rather strange though that the name label in the lid's top right corner looks to slightly overlap its edge. Looking at the Aeroplane model, the cross pieces on top of the fuselage at the tail and half way along could be the shortest of the Braced Girders, the wings the long Plates, and the propeller just possibly the two spoon-shaped parts in the box. But there doesn't seem to be any parts that could be used for the fuselage longerons.



BAYOT: S1 [38/1132]

3. **Snippet. 'New' System: CONSTRUCTUS** This Austrian system was made by a toy firm called Stomo Spiele. The Ebay ad spoke of Patent Angemeldet (Patent Pending) and the first word under the name on the lid is Patent. Several, perhaps

most, of the bright parts look to be A/Gs, and some at least with a 1*2h section. Of the latter the bend angle seems far from 90° in some cases but perhaps that is a trick of the light. Though without some unusual parts one wonders what basis there would have been for the patent application.

CONSTRUCTUS: S1 [38/1132]

4. **STOKYS** The company has changed hands again. A new web site, http://www.stokys.ch/index.html, says that it has been bought by 3 business men and is now Stokys Systems AG, at Widen 7, 8494 Bauma. Production of parts and sets was scheduled to restart last January and a new web site/shop was to be online in mid-March. New products are promised in due course.

Another site about STOKYS is http://homepage.bluewin.ch/kurtaebischer//Kurts_Stokys_Geschichte.htm where Urs Flammer gives a history of the system. It's in German but a Google translation isn't bad and worth a look. I was interested to see that as originally conceived in 1941, the hole pitch was to have been 10mm. It was changed to ½" before production began, but perhaps that is why the Strips are 10mm wide (although if I've understood correctly this difference was claimed as a virtue in the 1947 Max Stockmann Patent No.255449). Originally the Strips and Plates were a zinc alloy, with steel N&B; aluminium and brass for these parts came in 1945-46.

STOKYS: S2 [38/1132]

Snippet. 'New' German System: MEBAKA Right, the open box with the manual and lid propped up behind it. From another of the Ebay photos the lid label & manual cover are identical, apart from the blue 'floor' on the cover.

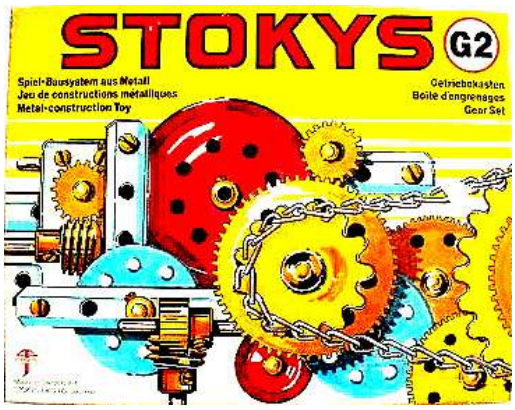
The Ebay notice said that the set was made by Firmer & Franke of 24b Tönning/Eider, a small town on the west coast of Schleswig-Holstein, across from Kiel on the east side. Also that from the '24b' postcode it would date from the 1940s – Wikipedia says that 2-figure postcodes were introduced in Germany in 1941 and ran until they were changed to 4-figure in 1962, but I haven't been able to find if the Tönning code changed at any point – I think that the present code includes '25' rather than '24' to denote the area.

It was also said that the box contained about 480 parts of which 95% were nickel and the rest plastic. The latter are probably the black parts in the top left compartment, with one or more Wheels or Pulleys of about 5h Ø; some 1½h Ø ones, and some small parts about the size of Collars. Apart from the Plates & Strips there look to be some Brackets in the centre compartment and perhaps some DAS. From another photo the round tins contain square Nuts about MECCANO size and Bolts of more than one length.

Right, two of the manual models, a Leuchtturm and a Brückenkran. It was said that the other models are: a Kugelbahn (Bowling Alley?); a Drahtseilbahn (Cable Railway); 3 Kränen (3 Cranes); a Windmühle; a Riesenrad (Big Wheel); and a Schwenkkran (Floating Crane).

OSN 40/1203 **MEBAKA: S1**

STOKYS Update It was noted in 38/1132 that the company had changed hands and under the new management it is now possible to buy sets and parts from the Stokys web site. When checked last October the sets available were only the five basic outfits, 0-4, the linking sets 0a-3a, and the Gears Outfits G1 & G2. As far as could be seen the box lids were as before, see 11/291, and to amplify what was said there all the lids are yellow and the Gears lids are as right. No manuals were shown with any of the sets, and those listed separately are the 0-2 with the same cover as before, and the G1-2, not illustrated. No mention of Motors is made anywhere.



There are some changes to the parts relative to the last list to hand, from 2004, but before going to those **the changes between 2000 (see 24/687) & 2004** will be noted. The only ones of any significance were the addition of a Double Clip K15 (perhaps a part used in Stokys' earlier CLIP system), a Link K64 for the Roller Chain, and Ladder Chain K62 for use with the Gears (as opposed to the Ladder Chain K61 for the Sprockets – in passing the 2004 list also gives the old PN for K62 as 79c, so it was presumably in the system at some earlier time.) Also the Triple Pulley R51 was reintroduced.

The 2008 parts are listed on the web site with photos of some of them. It is impossible to see the whole range because the parts are listed under 15 main headings and then under a number of subheadings, and only those in one subheading can be seen at a time. To compare the range against earlier lists the list on the facing page was compiled and will provide a basis for future comparisons. The parts are listed under the 15 main headings with my English names and their new PNs (usually the previous numerals with a '0' in front, but sometimes a '1' or '2' denoting a modified part, often a change of colour). A few parts are a little difficult to describe concisely but the names are those used in OSN 23 & 24 and are illustrated (or fully described) there.

Compared with 2004 the parts no longer listed follow with their 2004 and, where they existed, their original PNs. • **Half Shafts** from the Differential, W03. • **200mm Screwed Rod** W22/90a. • **Single-Flanged Corner Gusset, Righthand** P54/51c. • **20mm Flanged Wheel** R21/59c. • **Double Gears** Z15 & Z17 (11/66 & 11/44t). • **Chain for Gears** K62/79c. • **Double Bearing Bracket** K41/78 (the cast zinc part). • **Nylon Bearing Strips**, 3 & 5h, K42/93 & K43/93a (invaluable with aluminium parts, a sad loss). • **Differential** K91/300. • **Rack Strips** W31/136 & W32, 11 & 22h. • **Emery Wheel, & Arbour** for it, T11/53a & T13/53. • **Track Link & Dredger Bucket**, W62/405 & W63/410. • All the **Lamps &** their Fittings. • The few remaining **5/32" BSW** threaded parts.

The new parts are shown in orange in the list right. Notable are an 85mm A/G; an Obtuse A/G; and 3 more sizes of Steel Ball. And perhaps the 'Bogen' Plate P060, depending on what it is exactly. In addition the Winch Drum, Bush Wheel, Face Plates, and Plastic Plates are available in alternative colours. The N&B are still blackened steel and the Nut is now listed as 6mm A/F, so presumably the 7mm size is no longer available.

OSN 40/1203 **STOKYS: S3**

Achsen (Axles)

- **Crankshaft** W001
- **Crank Handle** W002
- **Axles** W006/010-017, 60/30/50/85/120/150/200/300/500mm
- **Screwed Rods** with one smooth end W021/23, 100/40mm

Bügel (Brackets)

- **DAS** E031/032/035/037/041/042/043, 1*8*1/1*4*1/1*5*1/1*2*1/2*2*2/2*3*2/ 2*5*2h
- **A/B** E033/044, 1*1/2*2h
- **D/B** E036/034, 1*1*1/2*1*2h
- **Double Bent Strip** E038
- **Reversed A/B** E039

Geländer (Braced Girders)

- **Braced Girders** G021-024, 8/16/24/32h long
- **Flanged Braced Girders** G031-034, 8/16/24/ 32h long

Lager (Bearing)

- **Roller Plate** W041

Lagergehäuse (Channel Bearing)

- **Flanged Plate** 3*3h, G003

Lochbänder (Perforated Plates)

- **2h wide** B011-017, 5/7/8/11/16/24/32h long
- **3h wide** B021-025/026/027, 5/7/8/11/16/24/32h long
- **4h wide** B037-041, 7/8/9/11/16/17/24/25/32/33/78h long
- **5h wide** B071-076, 7/9/17/25/33/78h long
- **Flat Girders** B051-068, 1/2/3/4/5/6/7/8/9/11/15/16/17/19/24/25/32/33h long

Platten (Plates)

- **Plates** P031/042-045, 5*4/7*8/7*11/7*16h/5*8h
- **Sector Plates** P038/041, 5-3*5/5-3*7h
- **Flanged Sector Plates** P039/040. As P038/041 but 4/5h high with base 5h flange
- **Corner Gusset** P051, 5*5h
- **Flanged Corner Gusset** P052,053, 4*4/5*4h
- **Bogen** (Curved Plate?) P060
- **Flanged Plates** P032-035/075/077, 5*4/5*8/5*11/5*16/5*5/5*7h (which sides flanged?)
- **Plastic Flexible Plates** P036/037/046/047, 5*8h green/red/blue/yellow

Profile (Strips)

- **Strips** P002-014, 2/3/4/5/6/7/8/9/10/11/16/24/32h long

Räder und Pneu (Wheels & Tyres)

- **Pulleys 12mm** R001/002, with/without boss
- **Pulleys 20mm** with boss, R004/104, riveted (genietet)/brass
- **Pulleys 35mm** with boss, R006/106/116, brass/brass/aluminium, rivetted
- **Pulley 60mm** R007, aluminium
- **Tyres** RZ03/05/08/61/62, 24/33/54/Lorry 76/Wide 47mm Ø
- **Triple Pulley** R051, brass
- **Pulleys 90/115mm** R011/012, aluminium
- **Flanged Wheels** R022/023, brass, 25/50mm
- **Winch Drums** R031/131, aluminium, 35mm, red/blue
- **Bush Wheels** R041/141, 35mm, red/blue
- **Face Plates 60mm** R042/142/242, red/blue/natural
- **Face Plates 116mm** R043/143, red/blue
- **Tyres with Hub** R061/062/064/065/068, brass 76/brass 47/brass 24/brass 33/red 54mm.
- **Balloon Tyres** RZ71-76, 50/60/72/80/100/125mm
- **Balloon Tyres with brass Hub** R071-76, 50/60/72/80/100/125mm

Schrauben/Muttern (Nuts/Bolts)

- **Bolt** S003/008, 7/20mm u/h
- **Nut** S004, 6mm A/F
- **Nuts** G906-908, 100/200/500 of S004
- **Grub Screw** S026/S027, 4mm long, slotted/Allen head
- **Grub Screws** G911/923, 100 of S027/026
- **Nuts & Bolts** G902/904/905, 100/200/500 of S003+S004
- **Washer** S019, BZP
- **Washers** G921, 100 of S019

Verbindungen (Connecting Parts)

- **Corner Bracket** E021
- **Flanged Corner Bracket** E001/002, RH/LH
- **Girder Bracket, 2h wide** E011/012, 1*1/2*2h
- **Girder Bracket, 3h wide** E013/E014, 2*2h/Trunnion (E013 with cropped corners)
- **Joint Plates** E022/025, 2*2/2*3h
- **Joint Plates** E024/023, E025 with 1/2 cropped corners

Werkzeuge (Tools)

- **Screwdriver**, red handled, H001/003, 3.5/3.2mm wide
- **Allen Key** H009
- **Spanner** H002

Winkelschienen (Girders)

- **A/Gs** V001-008/009/014, 5/7/8/11/16/24/32/78/85/14h
- **Obtuse A/G** V011, 11h long
- **'L' A/Gs**, 1*3h, G051-056, 8/11/16/24/32/78h long
- **'L' A/Gs**, 1*2h, G061-065, 8/11/16/24/32h long
- **'U' A/Gs**, 1*2*1h, G011-016, 8/11/16/24/32/78h long
- **'Z' A/Gs**, 1*2*1h, G041-046, 8/11/16/24/32/78h long

Zahnräder (Toothed Wheels)

- **Pinions** Z001/002/004, 19t/19t long faced/11t
- **Gears** Z003/005-012, 57/66/26/52/38/76/40/136/170t
- **Bevel Gears** Z031/032, 26/64t
- **Helical Gears** Z021/022, 13/37t
- **Worm** Z041
- **Contrate Gears** Z061/062, 44/64t
- **Sprockets** Z051-054, 13/26/44/58t
- **Double Gear** Z016, 11/40t

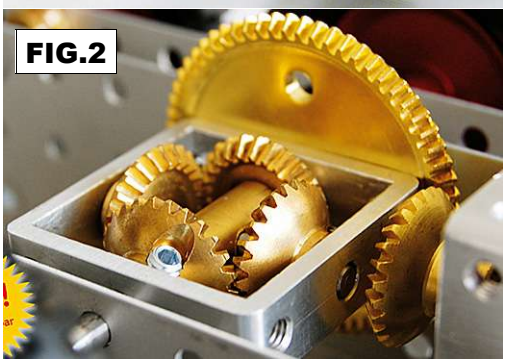
Zubehör (Fittings)

- **Ball Bearing** K001
- **Balls,** K002, 31 for K001
- **Ball** K003-005, 4.77/3.64/10.00mm
- **Collar** K011
- **Spring Clips** K012/015/016, single/double 90°/double
- **Coupling** K013
- **Dog Clutch** K014
- **Handle Crank** K021
- **Universal Joint** K023
- **Ratchet Wheel** K051
- **Pawl** K052
- **Eccentric** K053
- **Cranks** K031-033, Double Arm/Single Arm/4h wide Double Arm
- **Cam** K034
- **Sprocket Chain, Ladder**, K061, 1m
- **Sprocket Chain, Roller**, K063, .5m
- **Link** K064, for K063
- **Spring Cord,** 80mm with eyes, K071
- **Cord** K073, 5m
- **Hand Wheel** H005, zinc
- **Big End** (Strip Coupling) T001
- **Handrail Support** T002
- **Loaded Hook** T006, zinc
- **Tension Spring** T007
- **Hinge** T008
- **Threaded Pin** T009

STOKYS Update based on the company's website in June. The last account was in 40/1203.

The Sets The basic sets 0-4, their linking sets, and the 2 Gears outfits are unchanged. 4 Mini-Modelle sets have been added, SN80-83, called Töff (Motorcycle), Go Kart, Mini F1, & Flugi (right). All use the same wheels and have from 50 to, for the Flugi, 75 parts.

A Differential of an improved design has been introduced, as right. The frame appears to be an extruded section with tapped holes to allow the large Bevel to be bolted on. 3 of the 4 Bevels within the frame have a much shorter, untapped boss. 3 sets are listed: BG01, with the parts less the drive Bevels; BG02 as BG01 but ready assembled; & BG05, all the parts including the drive Bevels. From another photo it looks as if the large Bevel may have no boss.

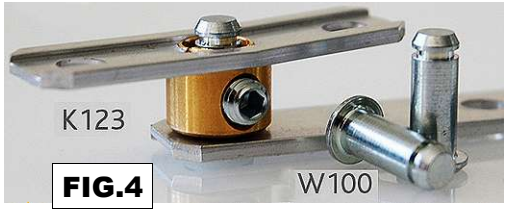


Motors etc New too are ranges of Geared Motors, Transformer/Rectifiers, Connecting Cables, & Switches. All, apart from the Cables, are housed in yellow, rectangular boxes with tapped mounting holes in one or more

faces, as in the Motors above. The Motors are M131-3, 12v, 35*35*86.5mm in size, with a 12.7mm long output shaft. Their speed/current/ torque are 260,55,11rpm/.2,.5,.3a/ 0.14,.45,1.15Nm respectively. The Transfos are M105 & M113, 230 to 12v, with 2.5 & 30w outputs [sic], in boxes 35*35*48 & 35*73.5*73.5mm. The Switches are M121-2, 35*35*13,19mm in size, and are 1-pole on-off, & 2-pole fwd-off-rev. The Cables are M065-8 black, 075-8 red, 085-8 yellow, 095-8 blue, 50, 100, 200, 400mm long, with end plugs.

The Parts A number of parts are no longer listed, and there are many new ones, but mostly different sizes of the structural parts. Items that stand out are the BZP N&B, & the Double Gears. I will list all the changes as additions to/ subtractions from the list in 40/1204. A few of the new parts are not illustrated and it's not entirely clear what they are. On the website Parts K100 to K137 & W100 are listed separately from the other parts under the name Gelenke but here they are in their appropriate sections.

Achsen (Axles) Plus: • **Gelenkbolzen** (Headed Pin) W100, 4mm Ø, 10mm long. It is shown right passing through a Strip and held in a Double Arm Crank by a Grub Screw. There is no indication of the intended use of the groove at the Pin's tip. • **Axles** W007/009, 70/35mm. • **Screwed Rods** T019-022, 25/40/100/200mm (it is not clear if these are fully threaded).



Bügel (Brackets) Plus: DAS E050-051, 3*3*3/3*2*3h

Lochbänder (Perforated Plates) Plus: • **2h wide** B018/ 114/123, 78/14/23h long. • **3h wide** B028/119-122/124/125/ 130/133, 23/3/4/6/8/16/25/78/33h long. • **4h wide** B042/ 089/090/115/131/134, 10/19/23/15/5/14h long. • **5h wide** B044-046/070/081-085/142/145, 19/24/ 24[sic]/6/5/11/14/16/32/15/8h long. • **Flat Girders** B069/110-112, 23/10/ 78/85h long.

Platten (Plates) Minus: • **Plates** P031/045, 5*4/5*8h. • **Flanged Corner Gusset** P053, 5*4h.

Plus: • **Plates** P106-108/141, 6*6/ 7*7/6*8/7*78h. • **Bogen** (a Curved Plate?) P061, 3h.

Profile (Strips) Plus: Strips P015/ 017/022/023/025/104, 15/17/12/23/ 25h long/135° Schutzblech (a Mudguard?) 4h.

Räder und Pneu (Wheels & Tyres)

NB: Pulley 20mm with boss, R104, and **Pulley 35mm** with boss, R106, are described as aluminium with brass bosses.

Minus: • **Pulley 35mm** with boss, R116. • **Tyres** RZ61/62, Lorry 76/Wide 47mm Ø. • **Balloon Tyres** RZ71-76, 50/60/72/80/100/125mm.

Plus: • **Balloon Tyres with brass Hub** R077, 125mm (R076 which was 125mm, is now 110mm).

Schrauben/Muttern (Nuts/Bolts)

Minus: • **All Nuts & Bolts.** • **Grub Screw** S027.

Plus: • **Bolts** Allen head, BZP: S006/009, 6/20mm; G951-954, 100/200/500/1000x S006. • **Nuts** 6mm, BZP: S005; G955-958, 100/200/500/1000x S005. • **Grub Screw** 4mm long, Allen head, BZP: S026; G959-961, 100/200/500x S026.

Verbindungen (Connecting Parts) Plus: Joint Plate EX14, 7h (shape unknown).

Werkzeuge (Tools) Plus: Screwdriver H010 Allen headed.

Winkelschienen (Girders) Plus: • **A/Gs** V015/017/023/ 025/033, 15/17/23/25/33h; • **'L' A/Gs**, 1*3h, G057-059, 17/19/25h; • **'L' A/Gs**, 1*2h, G060/066, 7/78h; • **'U' A/Gs**, 1*2*1h, G010/018, 6/10h; • **'Z' A/Gs**, 1*3*1h, G040, 8h; 1*5*1h, G049, 8h.

Zahnräder (Toothed Wheels) Minus: Double Gear Z016, 11/40t.

Plus: • **Bevel Gear**, short Z029, 26t (as used in the Diff.). • **Double Gear** Z110-121, 11/19, 11/26, 11/38, 11/40, 11/52,

11/57, 11/60, 11/66, 11/76, 11/136, 11/170t.

Zubehör (Fittings) Minus: • **Cord** K073, 5m, • **Big End** (Strip Coupling) T001, • **Threaded Pin** T009.

Plus: • **Spacing Ring** K010, 10mm. • **Pleuelkopf** K018, Big End? (possibly a new name for the deleted T001, or a new version of it). • **Chain** K062, red plastic. • **Driving Bands** K074-077, 300/450/600/960mm, 3.5mm PVC. • **Cranks** (NB Unlike the existing brass Cranks all the following are aluminium with brass bosses): K100, 3*4h Plate with a central boss; K113-117, Strips 3/4/5/6/7h with centre boss; K123/125/127, Strips 3/5/7h with an end boss; K133-137, Strips 3/4/5/ 6/7h with a boss at each end. NB The Hand Wheel which was H005 is now T005.

STOKYS Update These notes are based on the Stokys website in March.

THE PARTS Some 440 parts are now listed, over 50% more than in 2004 (see 40/1204). Most of the additions are structural parts, the existing Plates, Girders, Brackets, etc in different sizes, and a few new ones such as 3 & 4h wide Perforated Plates with elongated holes in one outer row. I gave up trying to make a concise list of all the changes, a task not made any easier by some different PNs, so there follows just the points of interest. It is easy to download a PDF of a complete list of the parts & sets from the website's homepage, and I found it easier to do so than to try to find individual parts within the (tidy-minded but unhelpful) system of categories and sub-categories used on the website itself.

New parts: • an additional **5h Strip** with round rather than slotted end holes; • the **Tractor Tyres** in Fig.2, R090 & 091, to special order; • a brass **6h Bush Wheel** K030; • a brass square Sliding Shaft, see Fig.3 (it is used in Set BG24); • **Name Plates**, a yellow **T-Shirt**, a red **Hard Hat**, & a wooden, **3-Layer Box** with a carrying handle.

Parts reintroduced: • **Rack Strips** Z210 & 211, both 10h long, one with A/G sideplates as before, the other with Flat Girders; • **Track Link** K062, red plastic.

Deleted parts: the **Double Spring Clips** K015, 016.

Other points: • Some of the **structural parts** are now available to order in lengths of 78 & 150 holes. • **Bogen** P060, listed under Platten in OSN 24 is the Curved Strip, and P061 (in 43/1310) is the same Strip but with only the outer & centre holes. • The **Bolts** are listed with both 6 & 7mm Ø heads. • The **Gears** include a 60t Gear but not a 15t Pinion. • 11 **Double Gears** are listed, with gears from 19 to 170t, all with an 11t pinion.

THE SETS • A **Bridge Set** BK01 has reappeared but with no details.

• 3 **Basic Sets** which equate to Sets 3 or 4 in cost are listed but with no details. They are for Mechanik, Elektro, & Fernsteuerung (radio control).

• 11 **new sets**, all of which have parts to make one specific, usually modestly-sized, model. None are motorised. All are in the Price List but only those asterisked in the details below are fully described on the website.

SN12* The **Lorry with Skip** in Fig.1. Steering in via the Handwheel on top of the cab, and the skip is loaded/ unloaded from the Crank Handle behind the cab. The lightness of the parts would help in the success of this feature.

SN 13* **Crane Lorry**. The basic lorry as SN12 but a simple crane with a 9" jib replaces the skip on the rear platform.

SN14* **Low Loader**. Again the SN12 lorry but with a 12" long trailer.

SN22 **5-Axle Dumper Lorry**. A little longer than SN12 but with the same size wheels.

SN30* The **Tractor** in Fig.2. The most elaborate model in the range and perhaps comparable with the old range of Stokys 'supermodels.

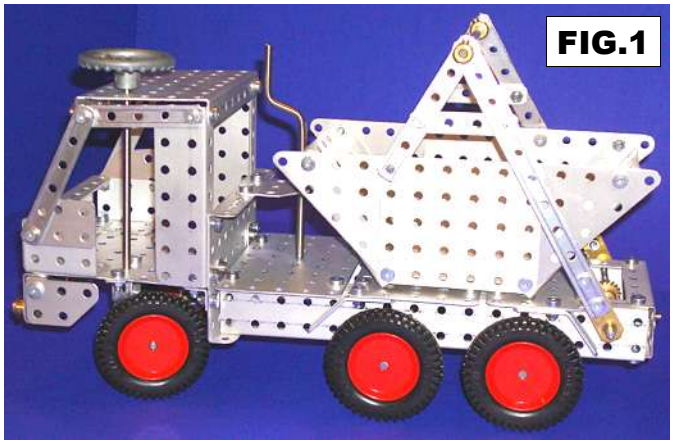


FIG.1

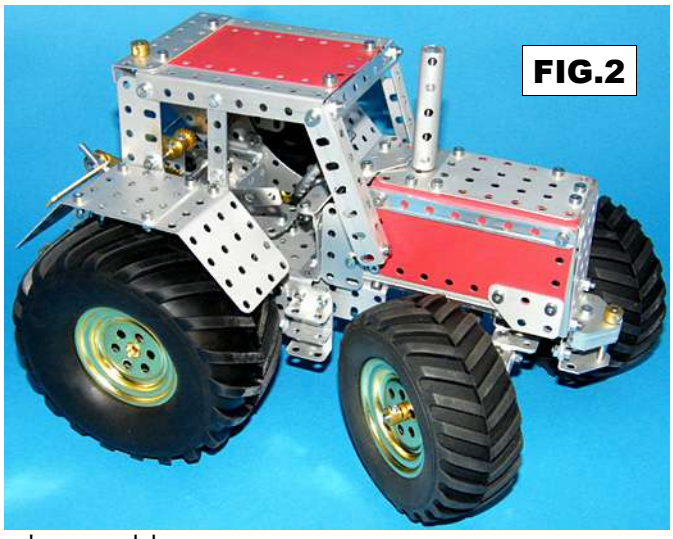


FIG.2

SN31* **Rotary Rake** (Fig.4) to be towed by SN30.

SN32 A **Trailer** for SN30.

SN40 An '**Astrom**' without planets – probably a simple? Orrery.

SN91 '**Reacer** [sic] **3 rädrig ohne Elektro**'. A 3-Wheel Racer which looks a bit like a drag racer. It has a small front wheel and unusual rear wheels plus a 'sail' on top (Fig.5) – could it be a Sand Yacht?

SN94* An **Electric Pylon**, 17" high.

SN95 '**KVA-Kran mit 6-fach Greifer**'. It looks like a framework to allow the 6-Arm Grab (Fig.6) to be demonstrated.

• Finally some **sets of parts** which are needed for particular mechanisms. • Two of the **Differential** sets, BG02 & 05, mentioned in OSN 43 continue, & BG05 is said to use the bossed Bevels rather then the shortened type. • A **Winch** BG08; • **Double Gears** BG10; • A **Rack Drive** BG14; • The **6-Arm Grab** BG18; • A **4-Wheel Steering Linkage** BG23; and • The **Sliding Shaft** assembly BG24 (Fig.3).

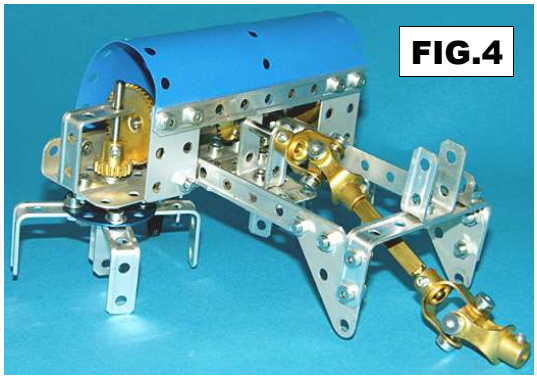


FIG.4


FIG.3

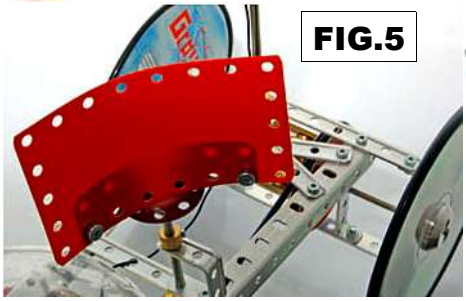


FIG.5

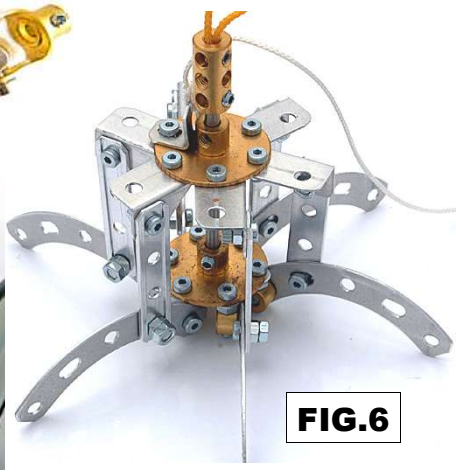


FIG.6

STOKYS in 2012 This year is Stokys' 70th anniversary, and perhaps because of that some 50 new parts have been added, over 30 sets, & various accessories. They are all new to me since the notes at 44/1337 in 2011, but some of the sets mentioned here may have been introduced in 2011, perhaps late in the year – the only items shown as new on the Stokys website are the Solar parts.

The PARTS Most are different sizes of strip parts, Girders, Plates, etc. I'll mention only those of more interest.

A new **Universal** (right), G725, replaces the one with Fork Pieces shown in OSN 44.

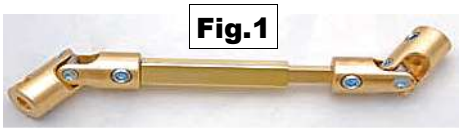


Fig.1

The **Sliding Shaft** is now available in 5 lengths, K192-6, up to 215mm retracted & 250mm extended.

S-Girders, P085, 088, 1*2*1h with 45° flanges, 5 & 8h long.

A 127mm Ø **Tyre**, RZ34, with the 2 pairs of **Hubs**, RY33-4, right. And a **Wheel**, R080, with a 78mm tyre on a dark cream painted hub.


Fig.2

Solar parts which can be seen in Fig.14: a **Panel** (it has 3 bays), and a **Motor** (the yellow box with the red Cable).

The **3-4 Set Manual**, DX33, has increased in price from 8 to 10 francs so possibly it has changed.

Discontinued Parts. A **D/B**, E036, made from a flat strip without raised edges. A **Wheel**, R073, with a 72mm tyre. The earlier **Universal**, BG24. The rather elegant **Handle Crank**, K021, (Winding Handle would be a better name – it is shown bottom centre of the first group of parts in 23/671).

The SETS **Auto sets**, GA01-2. They have the same number of parts as before but the 3 models shown are new versions of those in the original manual. See 13/335 for the

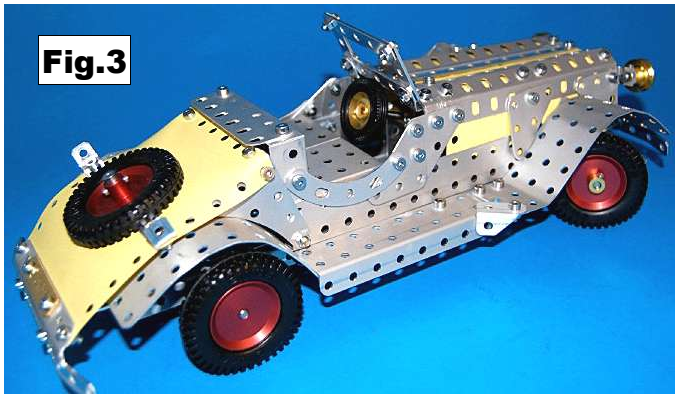


Fig.3

original of the one above. Below the new F1, the old one is on the box lid in 8/174.

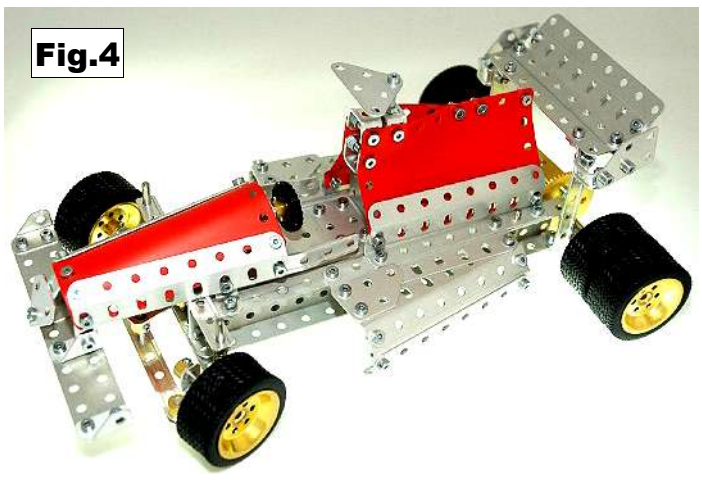


Fig.4

Next 3 **Micro models**, SN70-72, a Loco, the Loco plus Tender, and the Loco, Tender, & Wagon below.


Fig.5


Fig.6

Then 4 new **Mini models**, SN84, 86-7, 93, an articulated Low Loader, the Lastwagen mit Elefantkran above, a Bulldozer, & a Helicopter.

Single-model Lorry Sets. The range has been increased by 11 outfits to 15. All 15 use the same wheels, and all have steering, mostly with the steering wheel on the cab roof. And they all have the same cab, as in the models below and in the Skip Lorry in Fig.1 of 44/1337. The cab looks rather empty and it seems a pity not to have a seat in it, and perhaps another steering wheel.

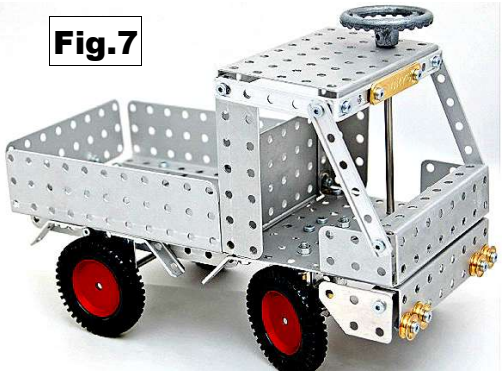


Fig.7

SN01-4 all have 4 wheels. Right #02; #01 has a flat bed. #03 & #04 are #01 with an articulated trailer, the #03 has a flat bed & #04 a 16" long van body.

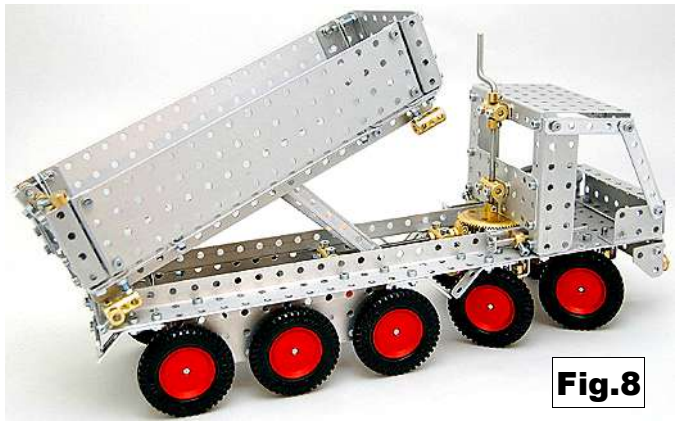


Fig.8

SN10, 11, & 15 are 6-wheelers, #10 with a flat bed, #11 with a load container, & #15 with an articulated tipping trailer.

The remaining 5 models, **SN21-3, & 25-6**, have 4-wheel steering, and #21-23 have the steering wheel in the cab. #21-3 & #25 have 10 wheels. SN21 is a flat bed, #22 too but with a load container which, by a linkage, slides over the back of the Lorry, tipping at the same time. #23 is a Side Tipper. The model in Fig.8, from the Stokys website, is not actually listed but it is shown because it gives an indication of the tipping mechanism. #25 is similar to #21 but has only 8 Wheels. #26 is #25 with an articulated low loader trailer with 6 wheels, some 18" long.

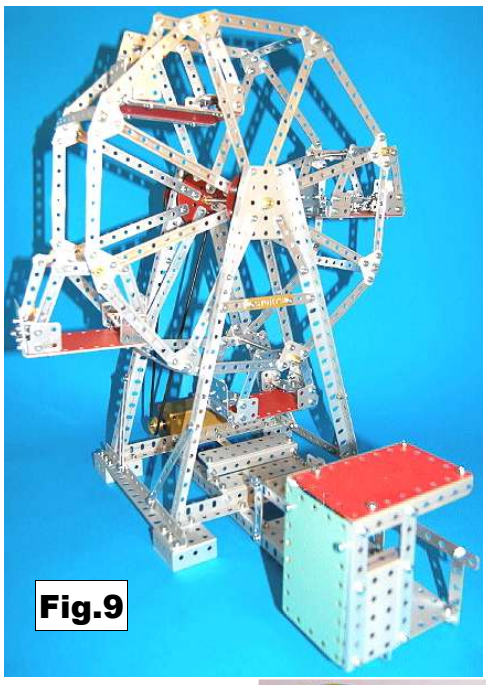


Fig.9

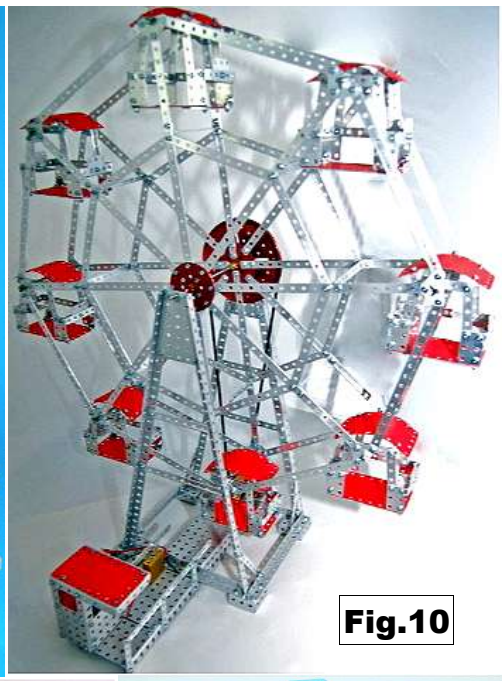


Fig.10

Other Sets **SN06 & SE06** are **Designing Machines**, the same models but hand- or Motor-driven. The mechanism is simpler than the earlier design noted in 23/673.

SE30 is the **Tractor** in 44/1337 but radio controlled. The set contains an Accumulator & Charger, presumably for the Receiver, & it is stressed that the Set does not include the Motor M132.

SN27 is a 4-wheel '**Quad**' 15cm long. **SN28** is a beefy looking **Pick-up Truck**, 37cm long, and SE28 is a R/C version, again without a M131 Motor. **SN53** is 31cm long **Space Shuttle.**

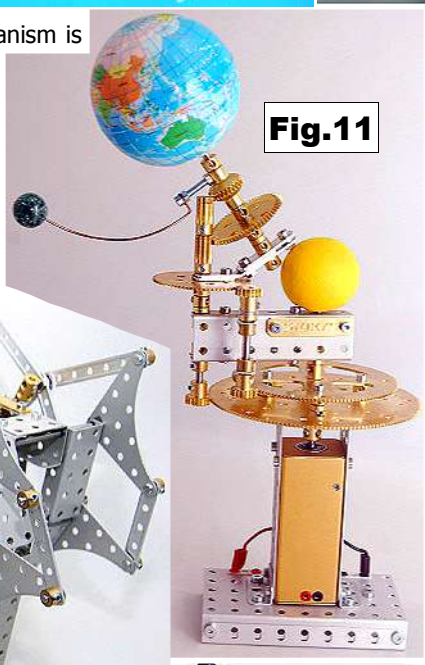


Fig.11

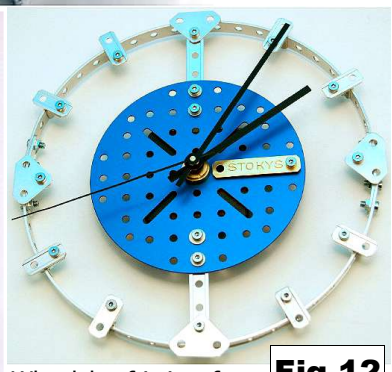


Fig.12


Fig.13


Fig.14

SN36 is the **40cm Ø Big Wheel** in Fig.9, and **SE36** is a motorised version with a Motor & Transformer. **SN/SE37** is a **60cm Ø Big Wheel** with 8 cars (Fig.10). Neither the small nor the large version is the same as the earlier model.

Next **SE40**, the **Orrery** (Fig.11) driven by an electric Motor. It replaces the SN40 unpowered version. The latter didn't include the globes but nothing is said about them for the SE40.

SN41 is the **Quartz Clock** in Fig.12 with I suppose a commercial motor.

SN50 is an hand-powered, 12-footed **Walking Machine**; **SE50** is the motorised version above and the Set includes a Motor, Accumulator, & Charger.

SE91 is the radio controlled version of the **Racer** SN91. It is shown with the red Plate as in OSN 44 but elsewhere on the website it has a Solar Panel as in Fig.14. The drive is to one Wheel by friction from a small rubber-tyred wheel on the Motor's output shaft.

Finally **GM10**, a set for schools to demonstrate **simple mechanics**. Illustrated are a belt drive between 2 sizes of Pulleys, and a suspended weight which might be a plumb bob or a rotating pendulum.

ACCESSORIES I don't have a complete earlier list but items new to me are a follows.

The 2.4GHz, 4-channel **R/C Transmitter, M153**, & **Receiver, M152,** listed separately. Also 2 **Servos, M125-6**.

The **Solar Panel**, a 4v **Motor** for it, & various accessories.

Three 12v **Geared Motors, M031-3**, smaller than the existing ones and of lower power.

A 12V, 5A **Rheostat, M116**, with a switch either sides of a knob.

An 11v, 850mAh lithium-polymer **Accumulator, M141**, measuring 35*35*61mm, and a **Charger** for it.

M144. **Brass Nameplates, B102-3**, as in Figs.11 & 12, spanning 4 & 5 holes.

A **Mouse Mat XW07**.

All the electrical items above are in the usual yellow boxes except the conventional looking R/C Transmitter, & the Battery Charger in a blue case.

PS There are now 520 parts in the STOKYS system against 280 towards the end of the original owners, Gebr. Stockmann.