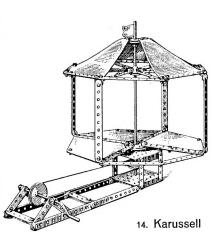


SOME A.W.S. DETAILS A.W.S. is included in MCS Part 5 but Ernst Leuthold was recently kind enough to send me a manual and a Strip from this simple German system, and these add a little to what's in MCS. A.W.S. stands for Aluminium-Walzwerke Singen, which means the Singen (a town) Aluminium Rolling Mill,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

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

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

SUMMARY OF MANUAL #Name: A.W.S. LEICHTMETALL-BAUKASTEN #Details of maker: ALUMINIUM-WALZWERKE SINGEN G.M.B.H., SINGEN-HOHENTWIEL #Dates &/or Ref Nos: none #Page size: 203x 144mm deep. #No. of pages: 16 plus covers. #Language: German. #Printing: cover is silver with black lettering; models are line drawings. #Page No. of Parts List/ Set Contents & highest PN: 16,16d #Sets covered: 1 (no No.) #No. of models: 15. #Name, Model No, Page No. of first/last model: Rollwagen,1,3; Russische Schaukel,15,15. #Other notes: prices on p2 are in RM.





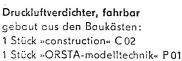
ORSTA PNEUMATIC SETS Some notes on the P01 and P02 Sets appeared in 4/65, 6/132, 7/156 and 10/267; now José Moreno has been good enough to send me a copy of the Manuals for these Sets, and these give a few more details.

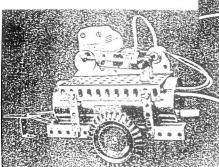
Each Manual is A4 size and has 8 pages including covers, all in German. Several pages of each are given over to technical matters, how pumps and jacks work, and the symbols used in hydraulic circuit diagrams. I can't follow these in detail but a few dimensions, pressures, etc, are given which are of interest. The Tank has a volume of 220cm3, and it takes 31/2 minutes for it to be pumped up to the blow off pressure of 50kPa, that's about 7psi (above atmospheric). The Pump Cylinder has a bore of 12mm and a stroke of 20mm; and it's driven by the geared Motor running on 4.5v. The piston in the Actuator has a dia of 16mm and a stroke of 40mm. The maximum force it can exert is 5N, about 1Lb. That's rather less than the theoretical 13/Lb that a pressure of 7psi would give acting on a 16mm piston but no doubt there are considerable losses in the valves, etc. Another force of 3N is quoted as the 'Stellkraft am Wegeventil, maximal', which may mean the force needed to operate the Multiway Valve #3002, but it sounds a bit high for that. The nominal dia (bore I suppose) of the plastic piping is 2mm.

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

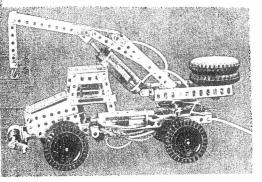
There are 6 models in the P02 Manual including 4 of the P02 models shown in the P01 Manual, and their photos are no bigger, just the circuits have been added. That's OK for the simpler models such as a 'Hydraulic' Crane, but grossly inadequate for the most complicated, a Hammer which needs Sets C03,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

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





Handkolbenverdichter, doppeltwirkend, in Form einer alten Feuerspritze gebaut aus den Baukästen: 1 Stück »construction« C 02 2 Stück »ORSTA-modelltechnik« P 01 Autokran gebaut aus den Baukästen: je 1 Stück »construction« C 03 »ORSTA-modelltechnik« P 02



## **ITEMS FROM LETTERS**

- 1. Numerous points of interest from Jeannot Buteux. A Swedish set called LEKSAKSSAMLARMARKNAD that he saw at a Toy Fair in Helsingborg, Sweden.
- An unknown aluminium system with an unusual pattern of Braced Girders, but unfortunately too expensive to buy.
- · A plastic set called TEX but also, according to one source, a metal set with the same name.
- · An early 1916 version of the French CONSTRUCTOR system with parts similar to those in MCS but black, and up to twice the size.
- · DELOUTAX, another translation of the Japanese name for DELTAX/DERUTAXE, see 11/288.
- Another recently discovered Scandinavian system, DVS INGENIØR.
- · A manual for Danish TEKNO dated 1931, which is several years before previously known dates. [TEKNO has TRIXstyle parts but a much larger range including more gears and circular parts. The Manual's date is only just after the original German Patent of September 1930 and it would be of interest to know the range of parts in the 1931 Manual.]
- News of a new Dutch set called MECHATRONICA. It seems to be intended for industrial use and is composed of a selection of TEMSI red and green parts, including the Temsi version of the 6-speed Richard motor, plus special parts, probably mostly electr(on?)ic. Shown in the brochure is an automatic beer pump which fills a glass placed on a stand in the machine. [The ultimate exhibition model?] The Set costs f 295 (plus tax) and the address of the manufacturer is BTC-Metaal, Postbus 2600, 3430 Nieuwegein, Fax 03402-53188. [I understand that this Outfit has been on sale for 2 or 3 years but is no longer available.]
- Temsi (11/292) has licensed production to various firms including ESCHO-PLAST.
- On A.W.S. (11/294), it appeared in about 1947 and one set known was marked by its purchaser as being bought at Baden-Baden in Sept 1952. [The reason I think the Manual in OSN 11 was from the 1930s is that the highest prize mentioned in it was parts to the value of RM5 - a sum that would have bought a MÄRKLIN No.0 set, say, in the 30s, but very little, I suppose, postwar.]
- Other colours for some ÉCÉPÉ and MÉCANIC parts (12/314) were tried, green for example and grey Wheels. The brackets around the Sets E and D bis mean that they were not available until towards the end of the ÉCÉPÉ pe-
- On MECHANIKUS (12/321), a HELLER-MÉCANICUS set was bought [new?] in Belgium in about 1980 and enquiries made it clear that it was not connected with the French toy firm Heller. A town Schmalkalden was mentioned several times in the Manual and it turned out that it was in what was East Germany.
- BURGSTÄDTER (12/324) has also been sold under the names PLASTICART and PLASTIKART.
- A bridge made from the LILIENTHAL parts (11/295) is on display at the Deutches Museum in Munich.
- TUBA was also made in Berlin and it appears to be the same as the UK version shown in MCS. The Plates were available in gold, yellow, green, red, and blue, and were also sold as special kits.
- Two different versions are known of FIX, HOHA, GLOBUS and IMPERATOR.
- On METEOR (12/302), its period was from the 1930s to at least the 1950s, and a nickel finish was used before painted parts were introduced. Parts from a 1950s set were brass plated.
- On MIGNON (10/262), one Angle Girder has been found which is made of steel, nickel plated.

- There were actually 10 'Groupes' in MULTIMOTEUR (12/304), the 10th being 'Traction Électrique'. Each Groupe is composed of several sets with a total number of between 70 and 100. From Groupe P (Prospection), sets P6, P8, P11, P12, and P13 are known but there were others, though not all were necessarily on sale at the same time. There was only one manual with the P13. Other examples are the '1er Cycle' with 25 sets from C10 to C34, and 'Mécanique' from M80 to M99. Members of Constructorama possess many sets, some 20 manuals, and in particular the 6th edition (undated) of the 'documentation général'.
- COZZONE (12/313) was mentioned in a Dutch book, and the date given for a set shown in it was 1952.
- · A Märklin catalogue of display models for dealers, some of which are 3 or 4m long.
- · And a couple more new names, MAKKO and a German system called FERROX.
- 2. From Richard Symonds. The ad (below) showing a photo of the box lid (or RIDE-EM manual cover) of a secondhand GILBERT RIDE-IT ERECTOR set. That's a new name to me. The main illustration is of a fairly modern looking boy in the driving seat of a Jeep type

vehicle. The only printing on it that I can read is 'First Life Size Erector' and 'Build ..... any of 5 different vehicles you actually ride and steer'. Apart from the Jeep, the 4 other vehicles are probably shown in the white circles, but only one, a 3-Wheel Scooter, can be clearly seen.

 A photo of some yellow and green parts that were all in one lot from a Toy Fair. Some are THE ENGINEER, see 12/328, and others seem compatible, including a 47.5mm dia Pulley with no holes in its face, a small Dredger Scoop,

and a Flat Trunnion with 7 holes, 2 of them elongated (opposite). Some of the other parts might be for a road grader or snow plough, and are painted the same green and have the same hole size. Finally a canvas belt, 2" wide

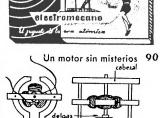


and 36" long with 10 nickeled Scoops, 1" by 2" wide, clipped to it, and some wooden rollers, 1" dia x 21/8" long, with Axles, 4"x3/16" dia through them.

- · A copy of an American fortnightly advertising paper called Toy Shop. Over 200 pages full of small ads but only 6 classified for OS, including 3 wanted and 2 for current spares, and I didn't spot any OS in a quick look at the dealers' lists. Full details on request.
- David Hobson sent one or two items on Gilbert in the UK. The 1921 GPO London Trades Directory lists The A. C. Gilbert Co. as a manufacturer of Gilbert toys, and scientific and educational toys, at 125 High Holborn, WC1. In a local South London paper (The Blackheath Guide and District Advertiser), Gilbert toys and ERECTOR were prominent for the first time in the 1921 pre-Xmas ads. They included: • Dubois of Lewisham who advertised various sets from 7/6. and the No.6 'includes a powerful motor which will operate any ERECTOR model'; also 'The New Wheel Toy' which made 12 models, 32/6 [see 8/198]. • John H. Bailey of Blackheath had, as well as the full range of MECCANO and PRIMUS outfits, Gilbert sets, including the Hydraulic and Pressure Set, the Light Set, the Gilbert Air-Kraft, Mysto Magic, etc. Mr. Bailey also announced, 'I have procured at low price a number of the Gilbert Machine Guns (B654). These I am offering at the absurdly low price of 5/11 each. These Machine Guns have a steel barrel and fire a wooden

360 **OSN 13**  A fair range of experiments are shown, with permanent and

electromagnets, bulbs and resistors, made up cells, and an electric motor. A No.3 Outfit is mentioned, to be ready shortly. Although certain specialised parts have to be assembled for the experiments, this isn't exactly a constructional system I think, so I won't go into more detail here. A box, from the manual cover, and one experiment are shown opposite. There's no indication of date except



that it is said to be a toy of the atomic age. There's nothing on the manufacturer either - MECANO is included in the name of the small Spanish system MICRO-MECANO "GUINA" but there's nothing else to link the two.

Josep also sent a copy of the 12 page manual of another Spanish set, made by the well known firm Payá in 1962, called **CONSTRUCCIONES ELECTRONICAS.** It falls into the same broad category with electronic parts (transistors, capacitors, a coil, etc.) wired together on a chassis using special spring connectors. Details of 7 different simple morse and radio (I think) transmitters and receivers are given.

- 3. Ted Van Klink mentioned that there is a good, albeit slightly pricey, supplier of **TEMSI** in Toronto.
- 4. Sven-Ulrich Glage from Hamburg sent a list of his sets and the following names were new to me: - DER JUNGE BAUMEISTER; EIFEL (seems to be a Danish system of MECCANO or MÄRKLIN style, with the name on the Brackets); FERMO (German, the models are mostly built of triangular plates); GA (German, very simple with unusual parts); GORDON (most parts including Strips and Plates are brass plated, possibly an early East German system); HERSA (simple system, of small scale, made in Berlin immediately after WW2); HW MAS-BAUKASTEN ( from the DDR firm that made DER JUNGE KONSTRUKTEUR); LEICHTMETALL-KONSTRUKTIONS-BAUKASTEN (aluminium parts similar to MÄRKLIN); METABA (German); PICO ELEKTRIK (looks like a 1970/80s version of ELEKTRO in MCS); STUDIO ELEKTRIK; SV INGENØR. He hopes to send more details in due course.

Other points: • On AWS (11/294), a later version of the set was sold with an updated manual containing additional models, and included in the set as new parts were 4 rubber Tyres. As far as is known none of the parts were coloured but there was an AWS clockwork motor which isn't mentioned in the manuals. • A CONSTRUCTION JEEP set that is different to the one in MCS and 14/373 - it is complete with a nice little tinplate Jeep, and the parts to build a Trailer and other models differ. It was made in Japan by Daiya. • An INVENTRIX outfit that was made in Germany in 1947/48 and has a clear resemblance to the Liverpool INVENTRIX in MCS. • A postwar KONSTRUKTION set which seems to be an earlier version of the system in MCS [and that in turn is thought to be earlier than the set described in 8/181]. • A METALLO set that seems to be pre-WW2 and Danish perhaps. It may be a 'new' system. • There was a German version of the PHILIPS ME 1200 set described in MCS. • Two 1930s model plans for HELLER MECHANIKUS (15/415) are for sailplanes made of aluminium that could really fly!

- 5. Photocopying tubular containers is always a problem and Kendrick Bisset has tried rolling the tube along to keep it above the moving light during copying. Rubber bands were put at either end to minimise slipping. The example he sent, of a GIRDER BILT tube, is very good indeed.
- 6. Don Redmond sent a note about research that he and

John Wapshott had done into the history of the Canadian **CASTLE BUILDER** system. The firm who made it, Castle Manufacturing Co. of Toronto, and its manager, Percy V. Jermyn, are listed in the city directory for 1917-18, but not before or after. A Jermyn family lived in Mimico, then a Toronto suburb, both before and after those years. The company's address was 69 Richmond St. East in 1917 and then at 80 Duchess St. As a working hypothesis Don suggests that Percy enlisted in 1914, was invalided home and founded the business in 1917, and died of Spanish influenza late in 1918 or early 1919, whereupon the business ceased. The resemblance to certain U.S. systems of the time has still to be explained.

Don also wrote that a MECCANO enthusiast of his acquaintance saw a metal construction set in a carton marked **BARUM CHEZ** (or similar) in an antique shop in Marmora (north of Kingston, Canada). It had gone when Don rang but was apparently made in Eastern Europe and had E984 on the box. Contents may have included 2x2" & 4x1½" Pulleys with Tires, 4 Rubber Tracks, Plates, N&B, and a small manual. Don wonders if it was repackaged MERKUR.

- 7. Dennis Snowdon mentioned that he bought a new **No.0 ERECTOR Set**, just like the one shown in 15/411, with 1" Pulleys and the FO Plate, etc, from a shop in Stanhope in 1943 or 1944. It cost 2/6, the amount he got from a local lady for digging her garden. He later swapped it for some MECCANO parts and now wishes he hadn't.
- 8. A friend of Tony Matthewman has pointed out that the text in the MCS pages for **RODOPI** is not Russian but may be Bulgarian. Could well be because a map shows some Rodopi mountains in the south of Bulgaria, and though I couldn't find Bratsighovo, the manufacturer's town in MCS, there are several names thereabouts that end in 'ovo'.
- 9. Last year Richard Bartlett found some sets called **MECHANIC** on sale in Malta, and they are probably akin to WISDOM (see 10/238), though some of the colours of the parts are different, with air force blue Strips and white (plastic) Flexible Plates. The Flanged Plates are still metallic red. 3 sets were available, and the largest included the special Cab with the motor built into the lower part, as in the WISDOM No.6 outfit. [Roger Baker has also reported sets on sale in Kuwait for the equivalent of £4 up to £15.]

Richard has also found the remains of what was probably a SCHEFFLERS set (see 12/324). There was no box and as would be expected the manual didn't have a name on it. However its cover, Illustrated Parts, and Set Contents agree exactly with those in MCS/FB, and the maker, VEB Metallspielwaren of 9112 Burgstädt, is the same too. Another clue is the Windmill Sail which is parallel rather than the later tapered one shown in OSN 12. The 7 sets available are shown on the back cover and though they retain the unusual SCHEFFLERS set numbering, their prices are identical with those for the Sets 1-7 in the BURGSTÄDTER manual described in OSN 12 (and included in MCS pt.5). So that would seem to put its date at near the point the name changed, although prices may not have changed as quickly in East Germany as they did in the West. The manual's PR of KE 51 76 III-8-9 690 might indicate a date of the 51st week of 1976. That at least puts it earlier than either of the 2 possible analogous dates from the BURGSTÄDTER

The major parts in the set have a dark grey, nearly black finish with a sheen to it, except that the Flanged Plates are dark blue and the 5h  $\varnothing$  MÄRKLIN-type (metal) Pulley is a dark red.

10. To add to what was in 15/424, Kendrick Bisset sent the following notes on the **STRUCTO** parts in his #2, 2A and 3 sets. • The A/Gs have round holes in one flange and 4.7\*7.6mm slotted holes in the other. • Wagon Wheels are  $1\frac{1}{2}$ " Ø, and have a very smooth tread,  $\frac{3}{8}$ " wide. The ones in the #2 set have 6 spokes and are painted black; the others

458 OSN 16

**A.W.S.** Since the short piece on this interesting than before, with a wider German system with aluminium parts in 11/294, an example of the basic set has come to hand. Also, some details of a smaller set, and the new manual & C/W Motor mentioned in 16/458.

The BASIC SET The box is 371/2\* 241/2\*21/2cm, and the lid is like the one shown in the next column except that it is light & dark silver instead of silver & blue. The inside of the base is grey-green and has partitions which, for the Plates, fit around them. The contents are listed below with comments on the actual parts where they add to the notes in OSN 11. **Holes** are 4.2mm Ø at 12.0mm pitch. The **thread** is M4.

• 1x #1 Screwdriver, nickeled wire, 108mm long o/a. • 1x #2 **Spanner**, not seen but in Ebay sets it looks similar to the MÄRKLIN part. • 4x #3 **Windmill** Sail. • 8x #4 'Roof' Sector Plate., flat, to be curved as required. • 4x #5 'Base' Sector Plate. • 2x #6 Flanged Plate, 5\*7h with 7mm slots in the flanges. • 24x #7 A/B, with a 7mm slot in one arm. • 15x #8 **Collar**, 9mm Ø, s/t, 7½-8½mm long. • 4 each #9,10 **Pulleys, 35,50mm** Ø, turned with flat sides and integral s/t boss which has slight taper to 10mm Ø. #10 has 8 face holes on a 35mm pcd. ● 2x #11 Crank Handle, 145mm o/a with a 95mm shank & 29mm handle offset 16mm. ● 2,4,1x #12a,12b, 12c **Axles**, 50,100,280mm long. #11-14 are aluminium, 3.92mm Ø with square ends. • 35,65x #13a,13b **Bolts**, 9,6mm u/h with a 7.0mm Ø tapered cheesehead. • 100x #14 Nut, hexagonal, 8.1mm A/F. • 23x #15 **Set Screw 3.5mm long**, the actual part is 5mm u/h and has a 4.9mm Ø cheesehead. Like the N&B it is aluminium. ● 22,12,16, 12x #16a,16b,16,c,16d **Strips**, 5,7,9, 11h long.

The NEW MANUAL has the same silver cover as the OSN 11 one but at 210\*144mm, is very slightly larger, and the 'Bauanleitung' on it is replaced with 'Erweiterte Bauanleitung' (Enlarged Manual) on a red band. The other covers are plain. Inside is an Introduction which mentions the C/W Motor, then a blank page, then pp1-63 with 69 models plus 2 more from the 69 but driven by the Motor, then 3 blank pages except 'Druck: Buchdruckerei J. R. Kugler, Singen', the printer, on the last one.

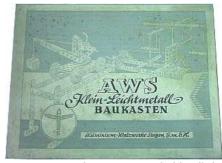
The models run from 1. Warntafel (Warning Sign) to 69. Hochsee-Dampfer (High Seas Steamship), and then the 'C/W' models, unnumbered & without a Parts List: Hobelmaschine (Planing Machine) & Bandsäge (Bandsaw). As before there is a line drawing & Parts List for each, with an additional view in five cases. A few of the designs are a slight improvement on the OSN 11 version, and the rest are generally somewhat more selection of models including a number of simple Machine Tools & Vehicles. One model is shown below, full-size, and two, reduced to fit in, on the next page. The unusual Plates, particularly the Windmill Sail, are used in a handful of the models, usually to advantage.

OTHER BASIC SETS Some sets in Ebay photos, presumably later ones, have the lid below and the inside of the



base is red. One set with this base has what appears to be a gold & silver lid, but possibly this was due to fading and the ambient lighting. Several have the red Erweiterte Bauanleitung band across one corner of the lid and these have black Tyres for both the 35 & 50mm Pulleys. One of the these sets had both manuals with it.

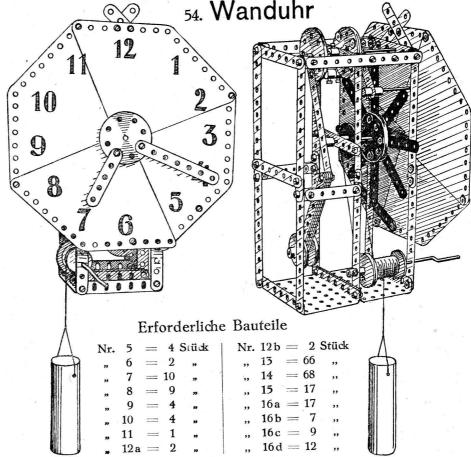
The KLEIN SET Klein means small and the box is said to be 33\*25cm in one of the 5 Ebay ads seen. All the lids are the same design as the one in the next column but in one the background colour looks grey. The models on it are a Gantry Crane & a Chair-O-Planes. All the sets have an orange partitioned base. The



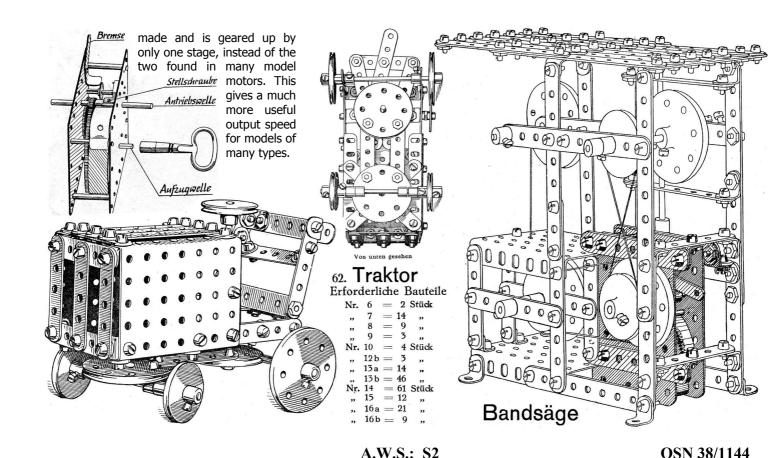
main parts in this set are probably all the different Strips, 1 Flanged Plate, 4x 35 & 1x 50mm Pulleys. One of the sets shows the 35mm Pulleys fitted with Tyres, and this outfit has one 5\*3h Perforated Plate not seen in any of the other sets.

The Klein manual cover looks like the one in OSN 11 but with 'KLEIN-' before 'BAUKASTEN'. One page seen has the same two models as a page in the Enlarged Manual, Sackkarren & Rolltisch, (Sack Barrow & Table on Wheels) but they are Nos.11 & 12 on p7 instead of 9 & 10 on p5. And another page has 21 Eisenbahnübergang mit Signal (Railway Bridge with Signal), another 'Enlarged' model but No.28 there.

**The Motor** has no markings anywhere. It is 22mm wide and the 7\*5h size sideplates are nickeled. Each has a centre hole at each end but the 'holes' on either side of it are omitted. There is a brake but no reverse. The drawing on the next page is from the Instruction Leaflet, a sheet 298\* 91mm folded into four. The 2 models shown in it are those in the Enlarged Manual. The Motor seems well



OSN 38/1143 A.W.S.: S1



Snippet. 'New' System: POLYKO East Germany produced Aue (Sachs)'. A technical school or organisation called a number of simple sets which were intended for use in

schools, and 4 examples of the P1 outfit described here were offered on Ebay last year. It is unusual in that the wooden box right, 391/2\* 271/2\*9cm, actually contains 16 of the small wooden trays shown under the box, 18\*6\*31/2cm, in 2 layers. Each has the same

parts and can be used to make the Scooter on the

lid for example. The words after 'P1' on the portion of the sliding lid below







are 'mit 16 Ubungssätzen' (with 16 exercise sets) and the word after Polyka in the logo, inset, is 'Aue', a town 30km south of Chemnitz. The heading on a model sheet with one of the other sets looks like 'Polytechnisches Kombinat | A.S.Makarenko |

A.S.Makarenko perhaps - Makarenko was a respected Soviet educationalist. The reference

at the bottom is: III-2-7-51 K b 3648 62, and perhaps 51 or 62 indicates a year. The lid label on the other 3 sets is white and the end of the reference on one is: K b 1601 63.

Only the top half of the Model Sheet can be seen & below the heading it shows the Scooter as on the lid. A sheet with another set has the Barrow right on it with no heading.

The parts are shown below with the A/B & 2h Strip shown twice. One Axle is not included, it is about twice as long as the 5cm one shown. The Wheel is 5cm  $\emptyset$  and has a rubber tyre on a hub with a tapped boss. In one set the hub looks silver. The Strips are said to be 13.5, 11, 8.5, 6, 3.5 & 2.2cm long and this gives a hole pitch of possibly 12.7 but most likely 12.5mm. From the Ebay information the likely content of each 'set', apart from the N&B, is: 4,2,3,8,4,4x 11,9,7,5,3,2h Strips; 8 A/B; 2 each D/B & DAS; 2 each Wheels & 5cm Axles; one each Screwdriver & Spanner; and probably 1 long Axle. Some of



been models for

POLYKO: S1 OSN 38/1144

or the Barrow so there may have

the Set other than the two seen so far.