

AMENDMENTS TO INDEX IN OSN 6 NAME: HAO WANG. TYPE: CH. CY: CN. THREAD: SPCE: 12.5e. dST: DAXL:

SUMMARY OF MANUAL. #Name: HAO WANG. #Details of maker: From Shanghai. #Dates &/or Ref Nos: None. #Page size: 195x132mm deep. #No of pages: 32 inc unnumbered covers. #Language: Chinese. #Printing: All illustrations are halftone. The cover is brown on fawn; otherwise reddish-brown on off-white. #Page Nos of Parts List & highest PN: 31.73. #Page Nos of Set Contents & highest PN: 3.74. #Sets covered: 00. #No of models for each set: 97. #Name, Model No, Page No of first & last model of each set: [Equivalent MECCANO names are given] Flat Truck, 00.1, 4; Double Arm Signal, 00.97, 30. #Other notes: None.



**ELECTRIC** Erwin Wyss has sent a photocopy of the cover of the manual from a Set he has, together with the Illustrated Parts List and Set Contents, and one or two details about it. The cover (below x.8) is rather charming I think, it dates from 1932 and has no Set No., probably at that time it was the only outfit available, with the #1-3 and A and B, mentioned in MCS, coming later. It is noticeable that the typeface used for ELECTRIC is different from that on the MCS #3 cover. The Parts/Contents are identical to MCS p3/4, and the contents of #3, to which most of the MCS entry relates, are listed there on p6.

On the parts Erwin wrote that the thread is 5/32" BSW and that the metal parts are nickel plated. He also amplified the address given in MCS, Sachs is near Meissen in Sachsen [Saxony].

AMENDMENTS TO MCS (as necessary, depending on version)

COLOUR: Metal parts nickel plated. PERIOD: c1932 to 1940s. MANUFACTURER: Bohmer, Hoffman & Co., Sachs, Near Meissen, Sachsen. Germany.

AMENDMENTS TO INDEX IN OSN 6: THREAD: 5/32W.

**Dies Büchlein weist den Weg vom einfachen Stabmagneten zu den Maschinen und Apparaten der Elektrotechnik.**

# ELECTRIC

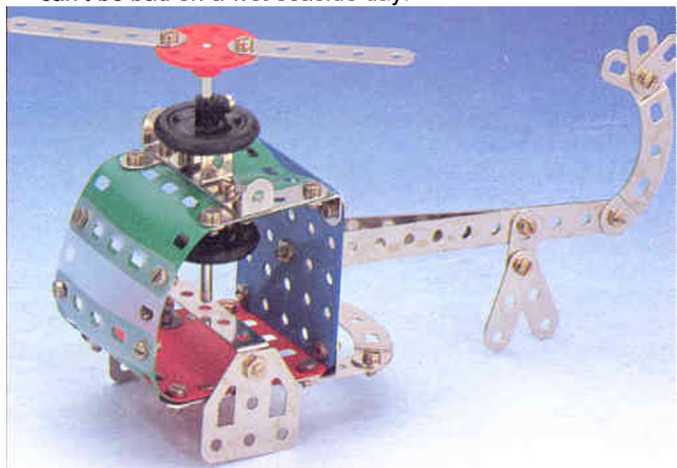
**Nicht sinnloses Basteln, sondern planmäßige Versuche führen zum Ziel**

Dies Büchlein gibt die Anleitung zum Anstellen von  
60 elektrischen Versuchen  
und zum Bau von:  
40 elektr. beweglichen Modellen.  
mit dem  
**Electric-Baukasten**

**A BILT-E-ZE FLANGED PLATE.** This Set is only in MCS/FB. The Parts List there makes no mention of a Flanged Plate, there is an 11x5 Hole Panel but the models show this to have only peripheral holes. David Martin though showed me recently an 11x5 hole Flanged Plate, fully perforated except for the centre 5 holes of the middle long row, which has BILT-E-ZE stamped on the inside of the blank area. It is flanged on its long sides and all the holes are round, of .162" diameter; the hole spacing is 1/2" but is slightly irregular, and it is painted a light/medium red.

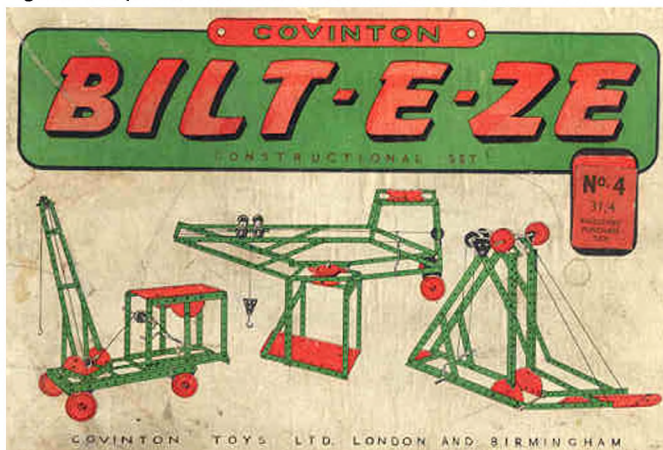


DENTIST CHAIR & the last HELICOPTER (but different to the one below). Some half of the models are from the OSN 19 Manual, but none has the Parts Lists or step-by-step instructions which were provided. The new models are a little simpler, as might be expected, but are otherwise more of the same. Verdict: 24 fairly straightforward models for £10 can't be bad on a wet seaside day.



**BILT-E-ZE** Details of this small UK system are given in MCS but its hard to be sure just what the parts are like, and how they differ from VOGUE. Now David Hobson has found a No.4 Set, the largest in the range, complete & still strung in its box, and has kindly lent it for examination. BILT-E-ZE parts were mentioned in 8/183 & 17/465 but they don't exactly correspond to those in this Set, more of that anon.

The Box measures 9\*16¼\*1½" & the outside is printed with a pattern of fine, irregular brown lines. The white 10\*8.4" label on the lid (below) has the name and 4 Manual models in solid red & green. At the bottom is COVINTON TOYS LTD. LONDON AND BIRMINGHAM, a name also on the Manual. A small label stuck over a space provided for it, gives the price, 'No.4 31/4 INCLUDING PURCHASE TAX'.



**The PARTS** There are 2 layers of parts, each strung to a brown card with thin, dark thread. The 72 Nuts are in a small envelope, and the Bolts & Split Pins in another; both have their contents printed on them. Most of the parts bear a strong resemblance to VOGUE and comparisons will be made in the notes that follow. The most striking difference is that the 4 Wheels run on ¼" Axles, which pass through the suitably sized apex holes of the Flat Trunnions.

• **DATA** (in mm) **Strip** (25-hole): •hole pitch/dia, 12.7/3.9-4.0. •width, 12.5; •thickness, .94; •corners chamfered. **Boss**: •o/d, 9.56; •i/d, 4.01; •brass; •double-tapped. **Thread**: 4 B.A. **Axle Dia**: 3.69 & 6.35. **Nut**: square 8.1 A/F; **Bolt**: round crosshead, 6.7 Ø; both blackened steel.

• The corner chamfers of the **Strips**, **DAS**, & **A/Gs** are slightly smaller than VOGUE, typically 3½-4mm along the diagonal against 4½-5. Holes are very slightly larger (3.9-4.0mm against 3.8-3.9), & the Strips vary in width a little,

12.5-12.7mm for the 25h, whereas all VOGUE are 12.7mm.

• The main **Plate** is 5\*11h with chamfered corners and only perimeter holes. The **Semi-circular Plate** (called Double Gusset Plate) & the (triangular) **Flat Trunnion** (called Axle Bracket) are almost identical to VOGUE except for the larger apex hole in the latter (6.4mm Ø).

• The **Angle Bracket** has chamfered corners and round holes, but they are 4.9mm Ø, no doubt to allow a little adjustment (there are no slotted holes in the system). When VOGUE A/Bs have round holes they are standard size.

• The cast zinc **Wheels** (right) are 1¾" Ø with a bore of 6.4mm; they are 8mm wide at the thin rim and boss, with a 2mm thick web which is painted red. The **Axles** for them are 6.35mm Ø & 4½" long; the Wheels are retained by 10mm long Split Pins in 2.1mm Ø cross holes at each end.



• The normal **Axles**, called Spindles, have square ends and are, like Vogue, a loose fit in the bosses. The smallest is 2" long, not the 1½" listed in MCS. They, like the ¼" ones, have a black chemical finish, and so do the steel discs of the **Pulley & Bush Wheel**. The former is 1.04" Ø and the 'V' is wider than usual, more than 5mm - it is just like the 'VOGUE' one described at the top of the 1<sup>st</sup> column of 17/465. The Bush Wheel is conventional with 8 holes in its disc. Bosses are 10mm long and have similar conical recessed peening to VOGUE but it is usually not as deep.

• The **N&B** are blackened too - the pressed Nuts are only 1.7mm thick, & the Bolts are 6½mm u/h. The **Span'driver**, also black, is just like VOGUE except that the blade end is only 2.7mm wide, to fit the crosshead Bolts.

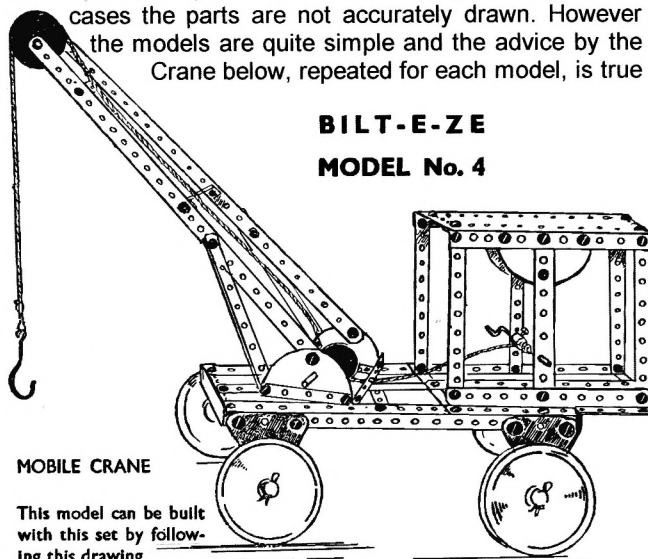
• **Collars** aren't like VOGUE, they are similar to the bosses, & 7.2mm long. The **Crank Handle** is VOGUE pattern except that the shank is 10mm shorter at 118mm, but it is only 2.92mm Ø and is copper plated. The Hook is almost exactly the VOGUE shape but is made of 1.6mm nicked wire instead of 2mm painted black.

• The parts are well made and finished, but with a very occasional sharp edge not found in VOGUE. Other blackened parts are the Flat Trunnions & DAS; the Strips & A/Gs are green, and the Plates red. The red is a shade lighter than VOGUE and the green is a little lighter too, and without the blueish looks of most VOGUE green parts.

• Apart from the unusual Wheels and associated parts, the Plate with its chamfered corners, and the A/Bs with larger than normal holes, the most noticeable difference from VOGUE is the different shade of green paint. Confirmation should come from the length of the chamfers, the size of the holes, and other detailed differences.

The **Manual** is a very simple affair with the Contents of the No.4 Set on the front and no proper covers. The 8 un-numbered pages are 132\*210mm deep & the 7 Models run from No.1, OVERHEAD TRAVELLING CRANE on p2, to No.7, EXCAVATOR, on p8. All are line drawings, and in some cases the parts are not accurately drawn. However the models are quite simple and the advice by the Crane below, repeated for each model, is true

### BILT-E-ZE MODEL No. 4





enough. The MCS material is identical to the appropriate pages of this manual.

The parts actually found in the Set correspond to the Contents in the Manual (and MCS) except that as extras there were: a 3" Axle, 2 Nuts, & 3 Split Pins; and missing: 2 Bolts. The 70 Bolts found included 2x 1/2" with slotted round heads.

**The Other BILT-E-ZE** In OSN 17 some parts were mentioned, including Strips with chamfered corners and larger, 4.1mm holes, that were thought to be BILT-E-ZE. The main reason was that among them was an example of the unusual Flanged Plate, stamped with the name, that was described in 8/183. Since then another mixed lot has yielded identical parts plus some others which may have been their fellows. They comprise: • A Flanged Plate, in a similar red to the No.4 Plate above. • All lengths of Strip & A/G in the same shade of green. • 4 Flat Trunnions, black but without the enlarged hole. • 2 Angle Brackets, black, with normal size holes. • 4x 1 1/4" o.d. tinplate balloon Road Wheels painted red, with 'tyres' 1/4" deep & 3/8" wide. • 3.98mm Ø Axles, 1 1/2, 3, 4, 5 1/4" long. • 2 brass Pulleys, the same size but 4.16mm bore, and single-tapped bosses with slightly convex peening. • 2 black Span'drivers as before but with 6mm wide ends. Rusty steel N&B: hex pressed Nuts 7.9mm A/F, and 6.4mm Ø RH Bolts. These parts, like those in the first batch, seem to be not quite as well made as those in David's Set, with rather more burr around the ends of the Strips for example.

**History** Nothing is known of the manufacturer. The 'Purchase Tax' mentioned on the box lid was charged from 1940 to 1973 but there is one possibly more helpful clue - some pencilled, incomprehensible letters inside the lid end in '50% Tax', and if that is a reference to P.T., that rate was in force only from Nov. 1947 to April 1948.

The similarity between BILT-E-ZE & VOGUE lies not only in the parts themselves but in: • Their names. They are mostly rather unusual, like Crank Wheel, Grooved Pulley, Panel, etc, and in most cases they are identical to those in the early 'blue' VOGUE manual, described in 17/465. Some of the latter were changed later - Panel to Plate for instance. • The set contents. The quantities of the main parts in the No.4 are the same as those thought to have been in the first VOGUE 'standard' set. The main differences are that the 5\*11h Plate is replaced by two 5\*5h Perforated Plates, and 4 of the Collars by some Axle Stops. • The manual models. The 7 models in the Manual are the same, with a few changes, often minor, as the 7 in the VOGUE 'blue' manual.

So there does seem to be a connection between the two systems. BILT-E-ZE might have been a copy of VOGUE or, more likely, vice-versa, but perhaps even more likely, VOGUE followed on from BILT-E-ZE, with or without some direct connection between the firms involved. That would be consistent with the 1947-48 P.T. date, and the likely late-1940s date for VOGUE's appearance.

Whether the 'other' parts came before David's set is equally difficult to determine, but possible they did because the VOGUE hole size, Axle diameter, and the bore of the bosses are quite similar to those in the No.4, and significantly different in the 'other' parts.

However the zinc Wheels & large Axles in the No.4 may not fit into this pattern. They are identical, apart from the length of the Axle, to those used in the PRINCE WILLIAM Railway Wagons, to be described in the next Issue. So they were probably bought-in items, unless the two firms concerned were connected in some way. But even if they were, it is hard to believe that having produced sets with perfectly satisfactory Balloon Wheels & normal Axles, the BILT-E-ZE management would modify the Trunnion, and change the drawings in the Manual, to accommodate the new parts - unless they were very cheap and/or were thought to add significant interest to the Set.

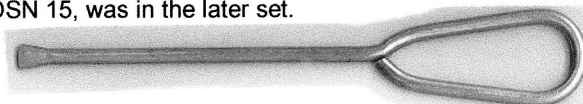
**More on ONADO** David Hobson kindly lent me a **No.2 Set**, unused & complete with manual. This is the first time I've seen an ONADO boxed set, and it has some features in common with the sets & parts, old & new, described in 15/404, and also with Don Blakeborough's Set in 21/615.



The base of the box is purple on the outside and measures 11\*9\*1". The lid is pale blue with a large, 9 3/4\*7 3/8", label (above) in navy & mustard on fawn, but in pastel shades. Somewhat faded perhaps, though Frank Beadle mentioned pastel colours for the early No.1 box. The words at bottom left are 'ONADO INDUSTRIES LTD', & the models are the early skeletal type. The parts are clipped to a yellow card, using brass clips, as in the No.1. The layout of the parts is very similar though the quantities differ and one or two of the parts are not the same type. The box for the N&B is identical to that shown in OSN 21: there was a box in the No.1 but no details of it are to hand. The only thing to show that this Set is a No.2 is a circular label stuck on the edge of the lid.

Although the No.2 shares some similarities with the early set, the main impression on looking at it is that the parts are painted in the later royal blue & crimson, and that the manual is identical with the later one described in OSN 15.

The differences in the contents and notes on the parts follow. • The **contents** are as in the early No.1 except that there are 3 extra 9h, & 5 extra 5h Strips; 2 extra Brackets; a 5\*7h Chassis instead of a 7\*7h; & no Flexible Plate. • The **Spindle** is 3" and not 4" - it has sheared ends and looks to be nickel plated. • The **Spanner** is as shown in OSN 21 (though a 2-ended one can be seen on the lid label), but at 92mm it is slightly shorter, and it is tin plated. • The **Screwdriver** (below), nickel plated, is very similar to the one from Don's set that he sketched, and is the same length o/a, 6". It will be recalled that a flat type, illustrated in OSN 15, was in the later set.



• The **N&B** are commercial 4 BA items of untreated steel. The 37 pressed hex Nuts are 7.9mm (5/16") A/F and about 2.6mm thick; the 36 Bolts have 6.3mm Ø cheese-heads and are 8mm u/h. Mixed with them is a single round-headed Bolt, otherwise as above. The Set Screws in the Collars are as in OSN 15 but have roundheads, and are of dull plated steel. From the N&B in this Set, and those in Don's, it seems that Bolts and Set Screws of more than one length, and type of head, may be found, but none of the square Nuts shown in the manual have turned up so far.

The extra parts found in **Don's No.3**, over the contents of the No.2, are: 23h Strips, promised but not yet arrived; 2x 19h, & 8x 2h Strips; 4x 1\*3\*1h DAS; a 5\*9h Flexible Plate; 1x 2" & 2x 4" Axles (instead of the 1x 3"); a 7\*7h Chassis; a Crank Handle; and 4 Collars.



**3 BILT-E-ZE Items** A No.4 set, the type with the 1/4" Axles, and a Flat rather than a Flanged Plate, was described in 22/628; the **First Item** now is **some Parts and a Manual** which correspond to that set in most respects. The only parts missing are the 2x 25h Strips, the Crank Handle, and 12 of the nominal 72 N&B. The N&B are quite different to the OSN 22 parts and a few of the other pieces show slight variations.

The **Details** follow. The 5 & 7h **Strips** are the same thickness as those in OSN 22, but at .8mm the 9 & 11h are noticeably thinner. The chamfered **corners** are sometimes up to 4 1/2mm long. The normal **Axles** are 3.63mm Ø. The **Collars** are 7.9mm Ø & 8mm long. The **Split Pins** are 12mm long. The **N&B** are 3/32" BSW, plain steel, with 4.8mm Ø RH Bolts, 1/2" u/h, & square Nuts, 6.3mm A/F & 2mm thick. No doubt the normal 4BA N&B were not available at the time; the bosses & Collars are tapped 4BA but there were no screws for them.

The **Second Item** is an Ebay 'snippet', showing the front & back pages of a BILT-E-ZE **Manual**, and the front in the general style of the OSN 22 one. Most of the text can't be seen clearly but it is either for Set 2 or 3, and the name at the bottom is Covingtons Ltd., rather than COVINGTON TOYS LTD. The address is different too and is possibly 'WEST ?? LONDON ???'. The models were said to go from No.1 Motorcycle & Sidecar, to No.7 Water Pump, and the latter can be seen on the last page. It is in the same style as the No.4 models except that a list of the parts required is included. It is built up from the Flat Plate with only edge holes, and the use of this part points to the manual being from a 'Flat Plate' set.

The **Third Item**, courtesy David Hobson, is an example of the **Other Type of BILT-E-ZE Set**, with parts, including the Flanged Plate, as described under 'The other BILT-E-ZE' in 22/629. The Set is a No.2 and is near complete but doesn't have a manual.

The cardboard box, 9 1/4"x8 1/4", has faded but was originally blue - the lid, with label nearly covering it, is shown right. At the bottom is COVINGTONS LIMITED, LONDON, ENGLAND, and a price of 13/9 has been written on in pencil. Unlike the OSN 22 No.4, there is no set number in the top right red panel, and the Set has been identified by the wording on the N&B packets. In



the bottom left red panel is 'REGISTERED DESIGN'. The parts are in two layers, mostly wired to light brown cards but the Wheels are held with bifurcated clips and the N&B are in two light brown envelopes, 2 1/2"x3 1/2", glued to the card. Both have 'BILT-E-ZE SET No.2' on them, with underneath 'This Packet contains 36 4BA Nuts' on one, & 'This Packet contains 30 1/4"x4BA screws // 6 1/2"x4BA screws' on the other. These envelopes have similar envelopes folded inside them and they contain the actual parts - one is plain and the other has 'BILT-E-ZE SET No.4' & 'This Packet contains 36 4BA Nuts' on it. Presumably the 'No.4' or the '36' was an error.

The **parts in the Set** are listed below with quantities in curly brackets, and comments where they differ from those described in 22/629. The **main changes** compared to the 'Flat Plate' outfit parts are the Flanged Plate stamped BILT-E-ZE in its centre, the slightly larger holes, the red tinplate Road Wheels with normal Axles, the brass instead of blackened steel Pulley, single- instead of double-tapping, the extra holes in the Semi-circular Plate, & the normal size holes in the A/B. Note also that the Crank Handle is much smaller in diameter than the Axles, though larger than the 'Flat Plate' part.

- 5,7,9h **Strips** {4,2,2}. 5,7h **A/Gs** {2,2}. 2,3h **DAS** {1,1}.
- **Flanged Plate** {1}. **Semi-circular Plate**, as before but with extra 45° edge holes, as illustrated in 19/539 {2} - these holes are not shown in the parts on the lid.

- **Flat Trunnion** {4}. **A/B** {4}.

- **Road Wheel** {4}. **Pulley**, all brass, 1.06" Ø, 4 1/2mm wide with flat, slightly recessed peening (the black steel type is shown on the lid) {2}. **Brass Collar**, 8.0mm Ø, 7mm long,

single-tapped 4 BA {1 found but probably at least 4}.

- 4,3,1 1/4" **Axles** {1,1,1, but 2x 4" might be needed}.

**Crank Handle**, 3.24mm Ø, black like the Axles, 165mm long o/a, with a 40mm handle & large radius 90° bends {1}.

- Dull plated steel, 4 BA **N&B**. Square & hex **Nuts**, 8.0mm A/F & 2 1/2mm thick. {16,21}. **RH Bolts**, 6.0 to 6.5mm Ø, 1/4 & 1/2" u/h. {32,6}. **Span'driver** {2}.

- **Holes** vary from 4.1 to 4.3mm as follows. 4.1: A/Bs, a few Strips, Semi-circular Plates; 4.2: most Strips, Flat Trunnions, Flanged Plate, DAS; 4.3: A/Gs.

**BILT-E-ZE [1]: S1 & BILT-E-ZE [2]: S1**

**OSN 33/984**

**A KITANO No.0 OUTFIT** A manual for this very minor, post-WW2, UK system was described in 8/189, and now, thanks to David Hobson, a set is to hand. It is in an end-opening box, 5\*8 1/4", coloured all over in the same vivid yellow & red as the manual cover. The top is the same design as the cover except for 'COMPLETE STEEL SET WITH INSTRUCTION MANUAL No "0" ', at the top, and at bottom right, 'CONTENTS LISTED ON REVERSE SIDE OF BOX'. And so they are. The parts are in a stout brown paper bag, 4 1/2"x7 1/4", with the contents of Sets 00 & 0 printed on the front, and overprinted in red at the top: **No.124517** with "0" underneath after 'Serial No.

The holes are at 1/2" pitch and vary from 3.9 to 4.4mm Ø in the different parts. At a glance they could all be mistaken for LYNX (see 16/436) but the holes in some are bigger than in any known LYNX parts. Also their ends, apart from the A/Bs, and the 2 & 3h Strips, are near fully rounded instead of the usual LYNX larger radius. (In passing another similarity to

LYNX is that the DAS & Brackets are all called Brackets preceded by the total number of holes in the part - so the 3h long DAS is a 5-Hole Bracket.) All the parts are quite nicely made, and except where stated they are nickel plated. Quantities in Sets 00/0 are given in curly brackets (the No.0 is the No.00 with more N&B, and 6 each of the DAS & Brackets.

2,3,4,5,9h **Strips** {6/6;6/6;6/6;6/6;2/2}. The 2 & 3h are dull plated. 1\*3\*1h **DAS** {-/6}. Despite the Complete Steel Set claim this part is aluminium, anodised orange (cf later LYNX). 1\*1h & 2\*2h **A/B** {-/6;-/6}. **D/B** {-/6}. **N&B** {15/32}. They are plain steel with a 5BA thread. **Nuts** are pressed, 6.3mm A/F & 2mm thick. **Bolts** have a 5.5mm Ø RH, and are 6 1/2mm u/h. **Tools**. A Screwsdriver Tool, presumably a **Spandriver**, is listed for both sets but a Spanner & a Screwsdriver were in the No.0, both identical to the LYNX parts shown in 16/440 (the 3.2" Screwsdriver). The Spanner's larger opening fits the Nuts.

**KITANO: S1**

**OSN 33/984**