ERECTOR – EREKTIT - BILDICO

These were the names used consecutively for one system during a few years from 1914 (though ERECTOR only very briefly), and it is of particular interest as one of the first to use Rods instead of Strips as the basic structural element. (The BILDICO name was used again after WW2 but for an entirely different small MECCANO-style system, see 27/805 and earlier.) EREKTIT/BILDICO parts are sometimes found in lots of old MECCANO but sets are rare and these notes are based on all that has become available over the last 20 years: one EREKTIT set to hand, probably a No.4 (the largest was No.5), details of a similar set belonging to Jacques Pitrat, photos of a probable No.3 set from David Hobson, Ebay photos of 2 smaller outfits, and photos of one small BILDICO set, courtesy Malcolm Hanson. David also lent me his 2 EREKTIT manuals and provided copies of all known advertising material & the Patent. My thanks to all concerned.

FIG.A

The PATENT The parts were described in Patent No.27171, application date 25 Nov. 1913. It was in the name of Leon Rees 'of the Firm Eisenmann and Company, 45 and 46 Basinghall Street, London, E.C., Merchants'. The initial provisional specification was followed by the complete version on 25 May, 1914, and it was accepted on 27 August. The main features which were ultimately produced were as follows. The 3 types of Clip shown in Figs.1-3 of Fig.B – in Fig.3 two of the Fig.1 Clips are riveted together but can be rotated relative to each other by hand. The curled edges were to be springy to hold rods (called Wires) and also Strips which would be pushed down between the curled edges (as in Fig.7). An angled joint was provided by an angle bracket made from a short length of strip onto which Clips could be pushed. A small drawing of one model was shown (Fig.8, 150% full-size) to demonstrate the use of pairs of Wires G joined across by Clips.

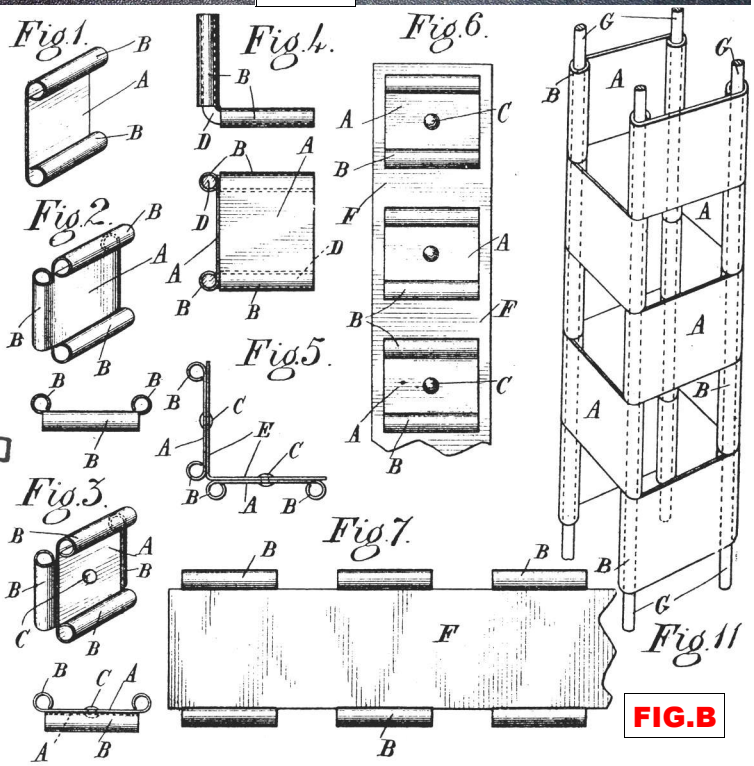
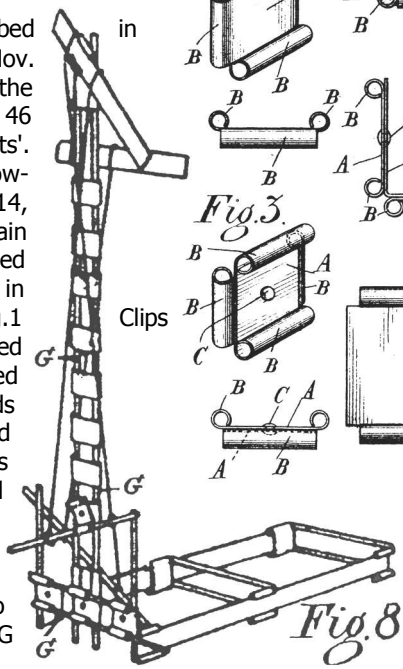


FIG.B



Various other possibilities were described. Fig.4 shows an angle bracket from angled wires joined by 2 Clips – it isn't said how this would be used & as drawn the ends of Strips added to each arm would interfere with one other. Fig.5 shows Clips riveted to an angled strip, & to a wider Strip in Fig.6. Angle, 'U', & square girders for larger structures could be made using Clips & Wires, as in the square girder in Fig.11 (& presumably the friction in the curled edges was assumed to be enough to maintain its shape).

EREKTIT

The PARTS Except where stated all are steel; most parts are nickelled but the N&B and Wheels are brass plated. All are nicely made, and the only problem is that in Jacques' set the discs of 2 of the Pulleys have come off the boss. The parts are shown in Fig.C right, but with only one (4") Axle, and one short (2¼") Strip plus part of a 12". **Holes**, except where stated, are 3.2mm. **The thread** is ⅛" BSW. **The boss** is brass, ⅜" Ø on one side & 7/32" on the other, single-tapped, with a bore of 3.0mm, a good sliding fit on the Wires. **The Set Screw**, also in the Collar, is nickelled, .2" u/h, with a 3/16" Ø cheesehead. It is very tight to screw fully home.

Notes on the parts, as listed on the back page of one of the manuals (there is no #11 or 16) follow, with probable quantities for the No.4 set (except perhaps the N&B) in curly brackets.

• #1-3 **Cross, Swivel, Plain** (sometimes called **Simple**) **Clips**. Formed from .015" thick steel. Unlike the parts in the Patent all have a centre hole, (3.5mm in the Swivel Clip). The eyelet in the Swivel Clip grips well and makes it quite tight to turn. {72,20,12}

• #4-10 **Strips** 12,7½,6,4½,3¾,3,2¼" long o/a nominally but actually about .15" shorter. The holes (3.2mm) are at the nominal length less ¾". The parts are .032" thick. Their width in different example varies from 11.8 to 11.9mm but the

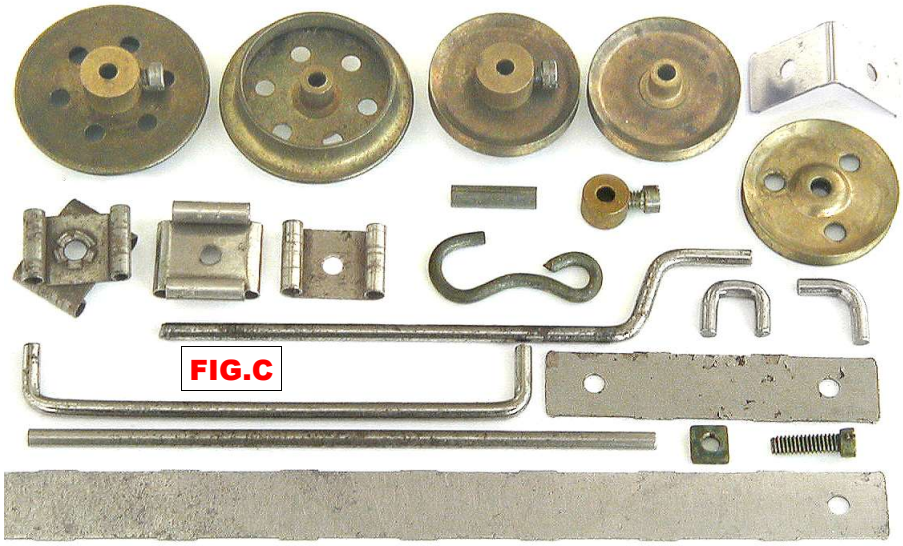


FIG.C

necking (½" long at ¾" pitch) is always 11.2mm wide (this is important when pushing the Strips into the Clips – the necking is not mentioned in the Patent). {4,8,0,0,8,0,8}

• #12 **Angle Strip**. The arms are about ¾" long and each has the ½" narrowed section. {12}

• #13-15, 17-19 **Wires** 12,8,6,4,3,2" long, with sheared ends but no burr, 2.87-2.97mm Ø but most are 2.92-2.95mm (nearer 2.8 in Jacques' set). {12,6,0,5,8,40} • #20 **Bent Wire**, the 'DAS' part, with arms at 3⅛" centres. {6} • #21 **Handle Wire**, 3¾" long o/a with a 3" shank and the handle offset by ⅝". {2} • #22 **Staple**, with arms at 11/32" pitch. {8}

• #23 **Angle Wire** about 7/16*7/16" o/a. {8}

• #24 **Hook** made from 2.3mm wire & 1⅛" long o/a. Dull plated. {2}

• #25 **Loose Pulley**, 1.02" Ø and .15" across vee. {6}

• #26 **Small Tube**, 9/16" long and dull plated. It is about .16" o.d. and rolled from .020" sheet. It is presumably meant to join Wires end to end but it doesn't grip many of them well enough, or at all. {6}

• #27 **Collar and Screw**. The Collar is brass, 5/16" Ø, 7/32" long, and single-tapped. {6}

• #28 **Flanged Wheel**, 1¼" Ø with a formed tread. {4}

• #29 **Tight Pulley**, 1.0" Ø and .16" across the vee. {4}

• #30 **Screw**, 7/16" u/h with a 3/16" Ø cheesehead. {7}

• #31 **Nut**, pressed, ¼" square, and .08" thick. {12}

• **Cord**. Though not listed 2 of the sets seen contain thin green Cord, as in Fig.D below.

The SETS The 4 boxes seen are black with, apart from the No.2, their insides lined with green paper, a similar shade to that in MECCANO boxes of the time. The set number isn't printed on the boxes but a label inside the lids lists which manual models can be made with each of the sets 1-5, and the parts used in the models then allows the size of a set to be deduced. The No.4 boxes measure 39¼*24¾*2½cm and their lid label (Fig.A) is 28½*10½cm. Notice that it includes a girl, rare at the time (and later for that matter), but not only that, she is actually making a model, not just admiring the boys' efforts, or playing with a Pram, or some other model, they have made for her. And it's a No.3 model; the boys' are from lesser sets. Elastic cords in the box's centre bay (below)

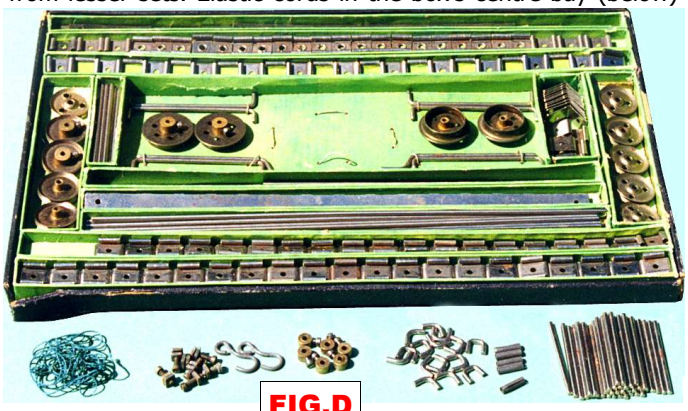


FIG.D

hold the 'DAS' & Crank Handles but it's not obvious how the Flanged Wheels are held or the purpose of the 4 loops of cord in the centre – they don't look suitable for a small parts box, but if not then where do the N&B & other small part go?

The lids of most of the sets have a fabric hinge along one long edge. Two, thought to be No.3's, are in slightly smaller boxes which scales at 35½*22½cm, but have the same lid labels. Some of the parts are in trays, as in the No.4, but others are held by tabs pushed up out of the backing card.

The fifth set is probably a No.2 and the box, light grey inside, measures (very roughly) 30½*17½cm. It again has the same labels. None of the internal packaging remains.

From the parts that can be seen in the manuals models: Set 1 includes 2x 12" Wires, 2x 7½" & 2x 3¾" Strips, 4 'DAS', 2 Crank Handles, a Hook, and 1 Loose Pulley; Set 2 adds 2x 12" Wires, 2x 7½" & 2x 3¾" Strips, and 5?6 Loose Pulley; and Set 3 adds 4?6x 12" Wires, and 4x 2¼" Strips.

As well as Sets 1–5 the label inside the lid lists a No.0 outfit which 'CONTAINS PARTS FOR THE DEVELOPMENT OF ALL MODELS'. It is also said that 'ALL PARTS MAY BE OBTAINED SEPARATELY'. No mention is known of linking sets.

The MANUALS There was no manual with my No.4 set but Jacques' edition is similar to David's. The only differences of note between them are their typefaces, and the back cover which either has a price list of the 31 parts in the system or text saying how good EREKTIT is for boys.

Each has 20 pages including covers, 23*10.7cm, and p1 is

shown above. At top left is 'Except for a few parts such as Wheels all the pieces in sets of "EREKTIT" are NICKEL-PLATED'. p2 mentions the various parts & has diagrams showing Wires & Strips in the various Clips, and a Clip being pushed onto a necked portion of a Strip. No Set Contents are given.

pp3-19 (with pp15-18 misnumbered 18-15) have 47 models from No.1 RAILWAY SIGNAL to No.47 GIRDER CRANE, with a small shaded line drawing of each, and a few words about the model, but no building instructions, and no list of parts. Much of the detail in the larger models, and some in certain of the smaller ones, is unclear. Nothing is said about which models can be made from which sets but the label in the lid did that. Set 1 made models 1-9, Sets 2 – 5 all models through 22, 33, 41, & 47. All the models shown overleaf are at their original size, with no significant loss of detail.

There are one or two 'domestic' models among the smaller ones, especially those for Set 1, but otherwise they are in the main bridges, vehicles, cranes, & other mechanical models (though there are no Gears and only the one size of Pulley). Their general appearance is much like those for conventional systems of the time but the lack of Plates is noticeable in some cases. Strips are sometimes used as a substitute to form platforms etc but are expensive in terms of the parts needed.

The best No.1 models are the Signal from the Patent, and a luffing Crane.. The No.2 models include an Aeroplane, 3 Cranes, the Conveyor Bridge in Fig.F, the Windmill in Fig.G and the Wagon in Fig.J. For Set 3 there are several larger models including a Telpher Span, a Passenger Elevator [lift], & a 6-signal Signal Gantry. There are also 5 machine tools, one of which is shown in Fig.K, though I'm not sure how the Pulleys are made fast to the shafts. The No.4 models include the Fire Escape in Fig.L, the Bridge on the manual cover, a Tramcar, a Steam Ship, a Church, & Tower Bridge. Figs.M, N, & O show 3 of the Set 5 models; the others include a Transporter Bridge, a Lighthouse, a [seaside] Pier, & a Pit Head Gear.

Overall a good selection of models and it would be interesting to try some of the larger, more complicated ones – though, see below, preferably with an unused set. They would certainly be very difficult for a young builder.

The manual with the Price List is on poorer quality paper and the line drawings are darker and less distinct – perhaps it was printed well into the war. It was with the No.2 set that was light grey inside.

USING the PARTS As there was no manual with my No.4 I made the Railway Crane in Fig.I (the kingpost is clamped to the truck by a Pulley above & below the intersection of crossed pairs of Wires). It is a sturdy little model but it doesn't really do justice to the Set as none of the 12" long parts were used. The only extra parts needed were spacers – either more Collars or stacks of washers would have sufficed.

The only real difficult in making the model was that often a great deal of force was needed to push the Strips into many of the Clips and to push the Wires through several successive Clips, or even one in some cases. Dismantling was even more difficult. This problem may have been due to the Clips having been slightly distorted by previous use but on the whole the parts didn't look to have been maltreated. The key was differences in the exact shape of the curled edges and their spacing apart – perhaps the tooling used didn't give the accuracy, or consistency, needed.

The narrowed portions of the Strips allowed the Clips to be evenly spaced but short of using extreme force to slide the full-width part of the Strip under the bottom edges of the curls it wasn't possible to move a Clip along between the necking. And even if one did so the Clip could rotate a little or slide out from under the curl at one side. It wasn't often that having the Clips evenly spaced was essential but it did allow parts on either side of the model to line up accurately. The alternative would have been to have had the whole Strip narrower but on the whole the necking seemed a good idea.

The concept of several Clips along a Strip with Wires on each side was excellent as it significantly increased the torsional stiffness of frameworks, a weak point of most systems using rods. It was an approximation to the FAC Beams (see 18/508).

As far as can be seen very few N&B are used in the manual models but they are quite often useful in my Crane. No Tools are mentioned in the Manuals and none were seen in any of the Sets.

BILDICO

FIG.H

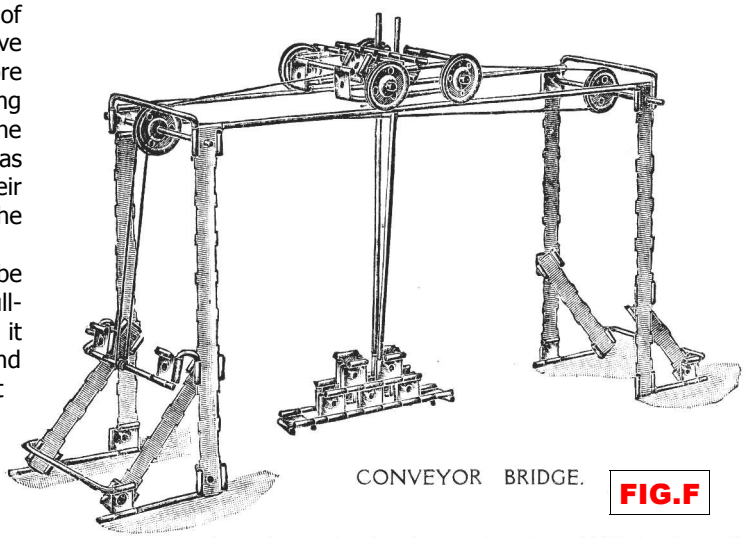
All that is known is the MCS entry and a photo, courtesy Malcolm Hanson, of the set on which it was based. Essentially the latter could be EREKTIT except for the change of name. The box is black, lined inside with green, & the label on the outside of the hinged lid has the new name in the same style as the old, as above (in B&W), with the EINCO trade mark replaced by a longer scroll & more leaves. The 'Patent Applied For' in the top right corner has also been omitted. The name is changed on the label inside the lid, but the same sets 0-6 are listed on it. The name is also changed throughout the manual except that the parts list is still headed EREKTIT. The set is probably a No.1 and the box scales at 12½*4¾". The manual's typeface is the same as that of the 'early' EREKTIT edition.

HISTORY

Eisenmann & Co. was the UK branch of a German firm, and was headed by Josef Eisenmann. It imported toys from Germany and also made them in this country (as Chiltern Toys). Leon Rees joined the company from Germany in 1900 and married Josef's daughter Maud in 1908. He inherited the company on Josef's death in 1919, and while his main interest by that time was in the Chiltern brand he was active in other toy areas throughout his life, including marketing CONSTRUMENTS in the 1930s.

The first known advert for the system in April 1914 was from a wholesaler, Whyte, Ridsdale & Co. 4 sets were listed (probably Nos.1-4) under the name ERECTOR: 'The LAST WORD in Metal Construction Toys (British Made)'. No other reference to the use of ERECTOR for this system is known and it seems unlikely to have been a typographical error, so perhaps ACG raised objections, even if his sets weren't actually on sale at the time – they certainly were by Xmas of that year.

MODEL No. 11.

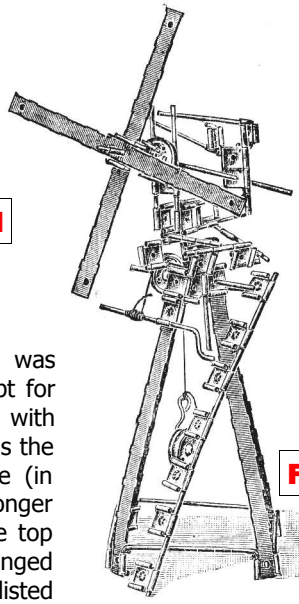


CONVEYOR BRIDGE.

FIG.F

A good example of modern engineering. Will develop and expand the Mechanical aptitude of the builder.

MODEL No. 13.



WINDMILL.

Fitted with Elevator. An old mechanical contrivance to utilise the forces of nature.

FIG.G

Anyway the next ad in June 1914 was for EREKTIT, with 5 sets listed at 1/-, 2/6, 5/-, 7/6, & 10/6. By way of comparison in 1915 a MECCANO No.0 cost 3/- and a No.2 10/-. The ad is curious in not giving a company name. The final ad in May, 1915, is for a stand at the British Industries Fair. EREKTIT was said 'To be had from all leading Wholesale Houses'.

No ads or dates for BILDICO are known & one can only speculate as to when the name was changed, or introduced, and why. There was much anti-German feeling at the start of the war & perhaps the change of name was to avoid the German connection. All the EREKTIT lid labels seen have the Eisenmann EINCO logo & this would certainly

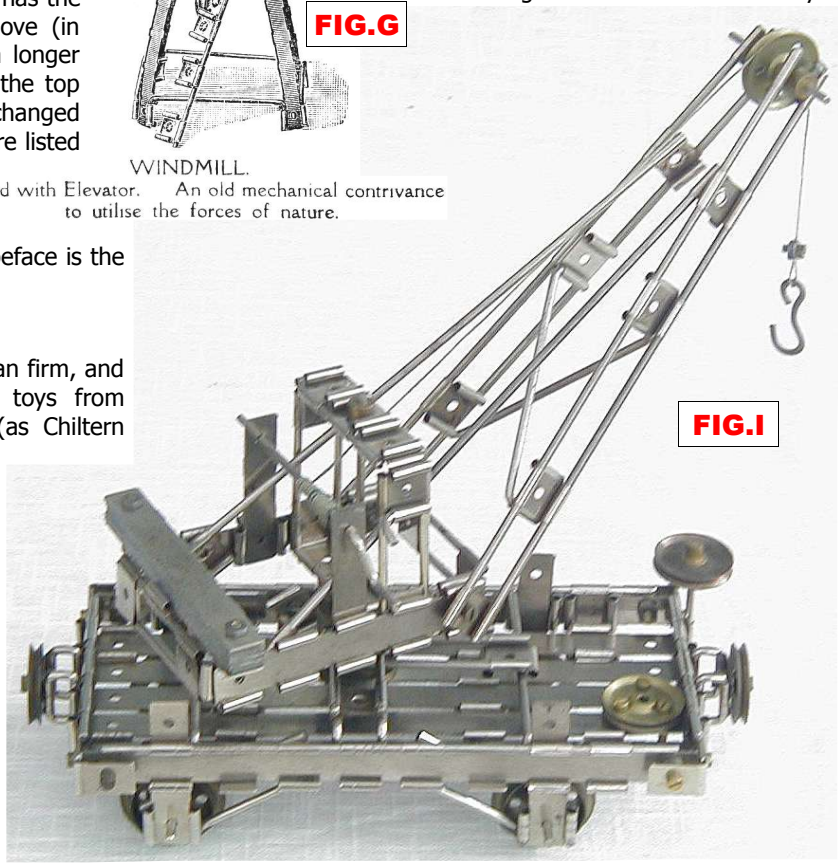


FIG.I

MODEL No. 20.

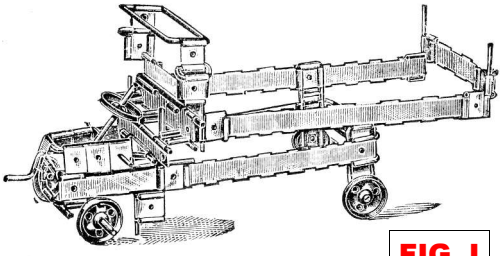


FIG.J

MOTOR DELIVERY WAGON.

A copy of the wagons in use for goods delivery by the transport undertakings, railways, etc.

reasonable price. The sets known could be from this period. If BILDICO appeared after this time, material shortages could have limited its sales during the war, but if it had been still available during the boom in toy sales that followed the end of the war, one might expect that more sets would have survived.

MODEL No. 46.

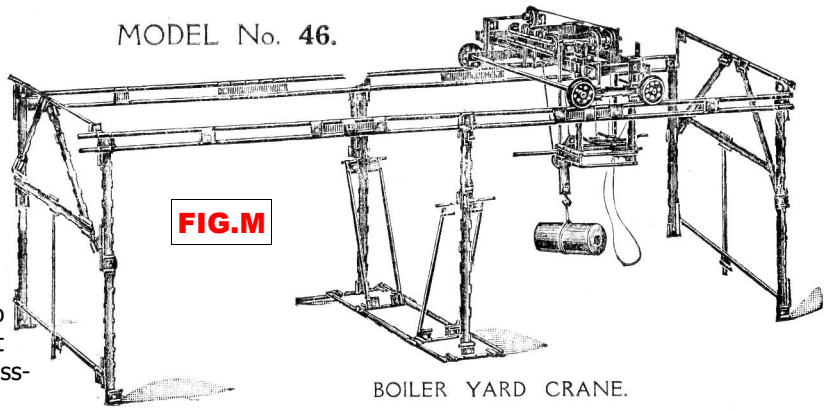


FIG.M

BOILER YARD CRANE.

For lifting and carrying horizontal boilers in big engineering works. The overhead carriage runs across and along, and

indicate a German firm to the trade, & perhaps to the general public. It has also been suggested that EREKTIT, if mispronounced, could cause embarrassment to potential lady purchasers.

When did BILDICO sets appear? Its manual has the same typeface as the 'first' EREKTIT edition but it has the same back cover with price list of parts as the 'later' one. So possibly it appeared between the two, & for a certain period EREKTIT & BILDICO ran in parallel. (In that case was BILDICO introduced to replace EREKTIT or was it simply another line aimed at a different (perhaps low-end) market?) It's not very likely that BILDICO appeared much later than the 'later' EREKTIT manual because if it had it would be reasonable to expect that the prices in the parts list would have increased – the price of MECCANO Strips was, on average, 75% higher by 1916.

How long did BILDICO last? And why are so few sets found? EREKTIT probably looked quite attractive when it first appeared, and may have enjoyed some success as an innovative, glossy looking, well packaged product at a

MODEL No. 32.

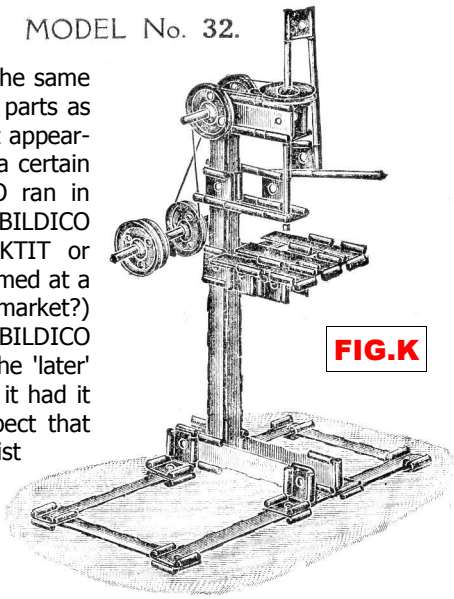


FIG.K

ENGINEERS' DRILL PRESS.

The model is taken from Machines in use in the factory where "EREKTIT" is made.

MODEL No. 43.

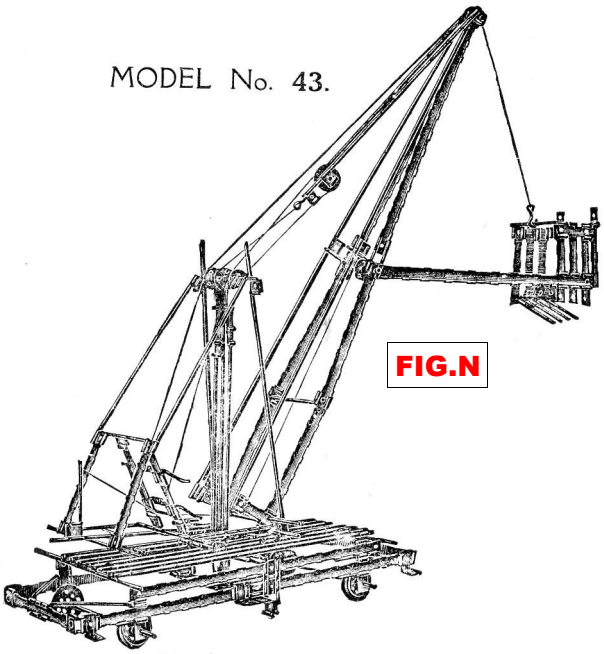


FIG.N

MECHANICAL NAVVY.

A digging machine used in making Railway and Canal cuttings. The jib and shovel-arm work independently, and the whole machine swings round in a circle. Mounted on wheels for transport.

MODEL No. 35.

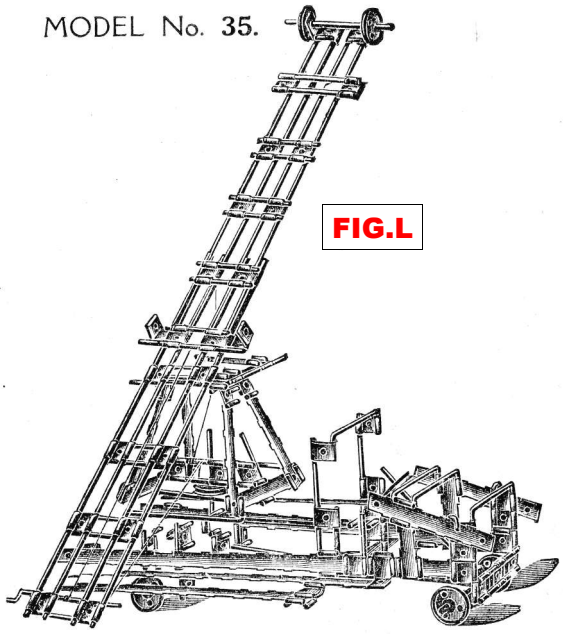


FIG.L

MOTOR FIRE ESCAPE.

The Ladder is telescopic in action, and when the Escape is travelling it lies over the top of Motor parallel to the body.

MODEL No. 47.

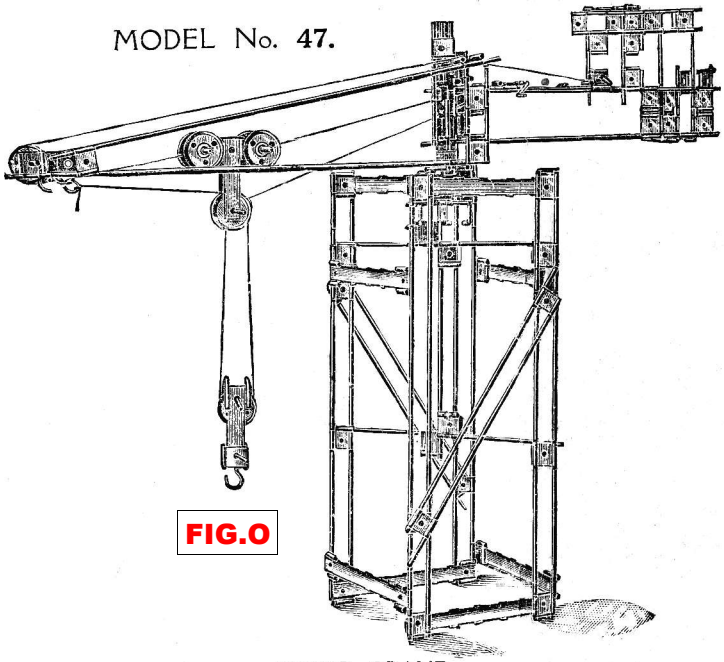


FIG.O

GIRDER CRANE.

Designed for picking up loads and distributing them.

47

OTHER SYSTEMS NEWSLETTER

OSN 47 NOVEMBER 2012

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EDITORIAL Changes are afoot. PDF files will be well known to most readers and I've been thinking that it would be a good idea to send out OSN articles directly to subscribers in this format. Doing so would eliminate postal charges and anyone using this method would simply pay an annual subscription of £5 to cover my incidental expenses. Articles would be sent as soon as they are ready rather than every 6 months or so & could be printed off by the recipient, single- or double-sided, or simply stored as files. Another advantage is that this method would allow more pages of information such as Set Contents, Illustrated Parts, etc without the constraints of 32 page Issues.

To allow recipients to keep track of the 'new pages' they will simply have page numbers following on from the last page of this Issue, plus the month & year it was sent out.

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Anyone who cannot adopt this change can of course continue to subscribe as at present and I will send out batches of pages when I have approximately 32 on hand.

Shorter NOTES, with thanks to all contributors.

1. **METALL-BAUKASTEN [5] - Correction.** On p1389 of OSN 46 some words were omitted at the end of the second paragraph in some copies. They followed 'a short Screwed Rod' and are as follows: 'a square Nut, & 2 lengths of cheeseheaded Bolt.'

METALL-BAUKASTEN [5]: S4 [47/1420]

2. **A Large BILDICO Outfit**. Paul Goodman has found one of the very hard-to-find BILDICO sets, see 46/1413, full of parts and perhaps complete. Its box is in the same style as the No.4 in OSN 46, black outside & green inside, but larger, the same width but 6cm more in breadth, with 3 extra compartments across the bottom of the box for Strips & Clips.

So, most likely a No.5, the largest set in the range (the 'sets 0-6 in the BILDICO para in 46/1415 should have read 'sets 0-5'). The Set has the same quantity of Wheels as the No.4 except 8 instead of 6 Loose Pulleys, and has the same green Cord. The lid label above, the same size as the No.4's, is as would be expected but the manual is like the 'earlier' of the two EREKTIT ones described in OSN 46 (with the 46/Fig.E front cover) but with the word EREKTIT replaced by BILDICO throughout.

This set's manual lends support to BILDICO having been introduced alongside or soon after EREKTIT. The BILDICO manual shown in MCS appears to be as Paul's but with the last page replaced with the price list of parts without its EREKTIT name being changed – probably hastily during WW1.

EREKTIT: S5 [47/1420]

3. **'New' Dutch System: NAME**

FIG.1

NAME probably means Special, and below, Marktplaats photos of a set showing the lid (with the name on it enlarged here top right), the box's base, and a tray of parts. These notes are based on this set, and a few 'mystery' parts to hand which can now be clearly identified as NAME. They were given to me some 30 years ago by Bert Love who had been sent them by a Dutch enthusiast, Dr. Boerdijk, in the hope that they could be identified. Keep a thing long enough .....

FIG.2

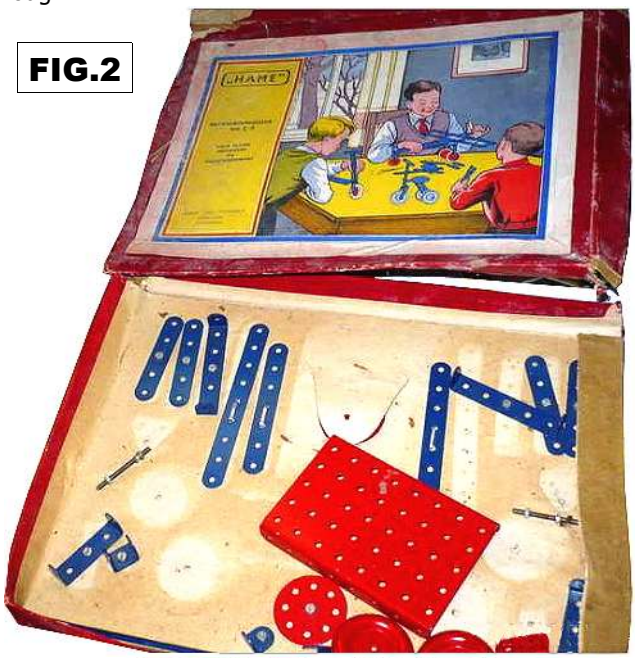
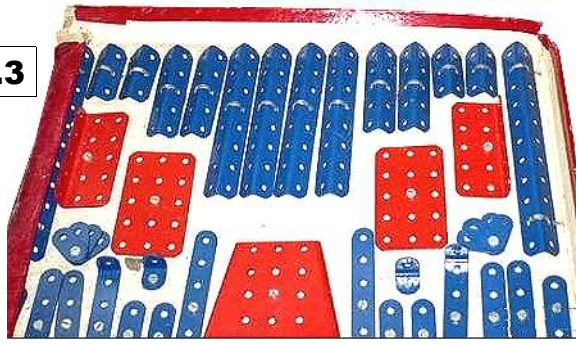


FIG.3



The 4 parts to hand are a 9h Strip, an 11h Strip, a 1*3*1h DAS, & a 5*8h Flanged Plate. All but the 11h Strip can be seen in the Set. Holes are 3.4mm Ø at 13.5mm pitch (but 13.4mm in the Flanged Plate). All the holes are round, as are all that can be seen in the Set. The Strips are 13mm wide but the DAS, 12½mm.

In total the 23 different parts that can be identified are: 2, 3 (probably), 5, 7, 9, 11h Strips; 3, 5, 7, 11h A/Gs; an A/B & a D/B; 1*3*1 & 1*5*1h DAS; a 5*8h Flanged Plate & a Flanged (probably) Sector Plate; a 3*5h Perf. Plate; a 5h long Girder Bracket; a Wheel Disc; a Road Wheel; a Screwed Rod about 40mm long; a cheeseheaded? Bolt (holding some of the parts down), & a small Hexagonal Nut (on the Screwed Rods).

NAME: S1 [47/1420]