DISTLER GIANT, Belgium's "greatest" metal constructional system? by Harry Mariën

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In 1901 Frank Hornby took out his first patent on a metal constructional system he had developed and called it MECHANICS MADE EASY. Six years later he changed the name to MECCANO.

Since 1907 the name MECCANO has become a legend and MECCANO has been fascinating millions of youngsters (and adults!) all over the world for more than 88 years already. When it became clear that manufacturing constructional toys could be a lucrative business, hundreds of competitors appeared all over the globe, imitating the great example.

Some of them were straight imitations, others had their own differences and styles. The Belgian toy manufacturers followed promptly: at least fifteen are known, some of only local importance, but others nationally and internationally recognised. Amongst names like MERCATOR, TECNIC (from UNICA-Kortrijk), LE CONSTRUCTEUR, LE PETIT ARTISAN DE LA MECANIQUE, METALLIX, METALBO, KWIK BUILDER and others, we also find that of DISTLER GIANT.

Distler was originally a German toy manufacturer (King 1978). At the end of the last century they already produced the so called "penny toys", marking their products with a thistle or with the initials J.D. (Johann Distler), and later with a globe. The company was situated in the Leinhardstrasse 7 in Nuremberg.

When Johann Distler, founder of the company, died in 1929, business was continued by two members of the board, Braun and Meijer. Due to the changing political situation in Germany, they had to leave there in 1935-36. Ernst Volk took over the production, and so in turn did TRIX, producer of toy trains and the metal constructional system with the same name (Weltens 1976), two years later.

In that period the range of Distler products consisted amongst others of cars, aeroplanes and railway stations. The company continued to exist independently. However in 1962 it was decided, in spite of a short revival after the second world war, to stop production. With the end of the history of Distler in Germany, starts the history of Distler in Belgium (1), and of course also GIANT's.

Distler specialised in the development and the production of micromotors. These relatively expensive, but very high quality motors found different applications, such as battery powered electric razors, mini record players for cars and especially in toy and model trains.

An important customer and, over a certain period, shareholder of Distler was again the TRIX company. Indeed, the latter possessed three production plants of their own in Nuremberg.

Near the end of the fifties, the TRIX group, and especially DISTLER, suffered from a shortage of manpower. Therefore they decided to look out for a possible purchaser.

Around that time, the former Belgian Congo had its independance disturbances which, among other things, forced the Belgian company "La Forminière" (from forest and minière = mining, diamond producer) to bring its capital to Belgium.

For this reason the Belgian company Indufor (from industry and forest) was established and began searching for good investments of several billions (!) of capital. A very small part of these investments was the purchase of the Distler company in 1962. The Nuremberg workforce was entirely taken over by the TRIX group. The company name, installations and machinery were brought to Belgium where, besides the necessary workers, a suitable area of nearly 10 acres (4 ha) was found. On this ground stood the buildings of an earlier motorcoach garage, in which in 1963 they started toy production, as Distler Toy, employing the 270 Belgians that had been engaged.

The operation was supervised by the German REITER, son-in-law of Johann Distler. The shareholders were Distler (Trix) with 50% and Indufor-trust Société Générale, 50%.

Micromotors for divers applications, toy trains with a clockwork motor (toy scale) and train sets, scale HO, electrically operated with an optional transformer, were produced.

The German BRAUN, leader of the Nuremburg development department, joined Distler Toy in Belgium in the same capacity, and designed two new projects: a train set for 9 mm track which required an investment of 25 million Belgian francs and was therefore not approved by the Board, and a new constructional system. Considering the earlier connection with Trix, Braun must have been inspired by this system, since he based his new design on the Trix configuration as to the shape and perforations. He nevertheless doubled the size, e.g. a Trix perforated strip with a length of 2.7 in (69 mm) now became 5.4 in (14 cm) long (fig. 3).

Of course this increase in size increased the surface area by four, and as the thicknesses were increased accordingly, each Distler part became nearly eight times as heavy.

Although one of the remaining instruction manuals (wheelset Giant 3) apparently shows a smooth axle next to the illustration of a threaded rod, as far as is known no sets actually equipped with smooth axles have ever been found.

It was very logical that this new construction system was called Giant, Gigant for the German market. Most of the other parts in the system, namely girders, do show the same resemblance to Trix parts, although by the difference in size and finish (the Giant parts were sprayed in blue metallic colour), Giant had a very specific and unique aspect, obviously quite different from all existing constructional systems. The sets were supplied with 6 mm(!) metric bolts with dome heads and like the hexagonal nuts, finished in black. The threaded rod, widely used in Trix, was also carried over into Giant, and made in brass plated steel and, of course, also in the unusual and robust size of 6 mm diameter. This threaded rod was often shown in instruction books making cross connectios and also acted as an axle. This in contrast with Trix, where next to the often used threaded rods, smooth axles with threaded ends are also available. The fact that these were missing in the Giant sets, along with for example pulleys, formed an essential shortcoming of the Giant system, in order to build, at least with only genuine parts, technically worthwhile constructions : an important aspect of constructioal toys is their use for model building purposes. Metal constructional systems are increasingly used to produce technically correct and realistic scale models. In relation to Giant it is of course not difficult to get for example, 6 mm axles, or to make pulleys and similar parts oneself.

Distler seemed to have planned the manufacture of pulleys but never did, for obvious reasons described further on. Once one gets used to the possibilities of the Distler system there is, in spite of the very restricted range of parts (compared with Meccano or Märklin), the possibility to build amazingly large scale technical creations ... and this with a toy that was essentially meant to be a constructional toy of the cheaper type.

The large scale building possibilities are especially assured by the presence of Giant girders: these parts (L-profiles with equal legs) were included in some of the Giant sets but could also be bought seperately, and were available in four different lengths. The longest especially, nearly 64 cm long, gave exceptional construction possibilities.

Distler itself took advantage of this characteristic in their manuals where, apart from the classic examples of constructions and models, there are pictures of children who first built their own chairs and workbenches before building the actual Distler model. In the developmemt of these girders Distler surely considered this rather unusual application: where girders were supplied pvc endcaps were always included. Later on Distler parts and girders would be used for different purposes especially by toy dealers who had difficulties in getting rid of their stock: we still know of a toyshop where all the display tables are made from Distler Giant girders! Distler Toy used part of the remaining stock (in 1965 the production of Giant was stopped) to build racks and shelves for use in their own storehouse.

For driving the Giant models they used the Distler micromotor already mentioned: for use with models the motor was built on a base with a two-speed gearbox for manual use with a neutral and a reverse position. The output shaft had a 10 tooth chainwheel and the whole was mounted on a chassis drilled with holes in Distler Giant

configuration, ready to use in a model. This driving unit was sold with a brass plated 40 tooth chainwheel (identical to that of Trix and probably obtained from that source), a plastic battery holder with reversing switch, nuts and bolts and a series of brackets, in a small cardboard box, under the name "GIGANT-electromatic". Although made in Belgium, the motors still carried the engraving "made in Germany" on their grey finished outside, underneath the logo carrying the name Distler within a globe.

The motors used for the Distler gearbox chassis had bronze bearings, technically the best choice for this purpose, but for other applications they could also be supplied with miniature roller bearings. It is worth mentioning that in the mid-sixties these Distler micromotors were the only ones which met the NASA specifications for certain applications. Distler Nijvel produced ten handmade and very intensively tested (and very expensive) micromotors for the American Apollo space programme.

Distler Toy organised its own marketing and developed a modest sales organisation with dealers all over Europe. A market was also found outside Europe (Brazil), although the highest sales lay in Germany, Austria and Belgium. Sadly sales weren't according to expectations and certainly didn't match production. After investigations in 1965 they had in stock no less than 300,000(!) train sets with clockwork motors and a similar quantity (!) of electric train sets. Most of these were still made with out of date lithographic printing techniques on tin plate. There was also 15 tons of Giant in the warehouse. Most of these goods were sold at cost price, mainly to German speaking countries. The liquidation of this stock took no less than three years. In the reorganisation subsequent to the 1965 investigations it was decided to stop the manufacture of trains and also of the Giant constructional system. Some members of the board and 220 workers were discharged. Micromotors, their speciality, stayed in production and were supplied to model train manufacturers and record player producers. In the last application, it was especially Phillips Germany who was their largest customer, taking more than 300,000 motors per annum. These micromotors were also used for driving Distler's tin plate Porsche model car, which is a rare and much sought after collectors item nowadays.

In 1966 Distler also started to manufacture miniature toy cars of the Dinky (2) type, using zamac injection techniques. This range of toys was commercialised by the company Sablon-Production in Braine-le-Château (Belgium). In the same year they changed the name Distler Toy into Distler S.A.

In 1967 another reorganisation was carried through and they definitely went in other directions producing products which were better placed in the market than toys. Apart from the production of tools for presses, moulds with very low tolerances for the injection of thermoplastic plastics (a.v. Siemens) and for zamac-brass alloys, were produced.

In 1978 they worked on general mechanical projects for among others British Leyland (Seneffe) and for Barco. In 1980 the trust Société Générale and the banks decided to stop new investments and the company was sold to an Anglo-Irish concern. In 1981 this group was declared bankrupt and this consequently led to the final disappearance of Distler.

LITERATURE :

HORNBY F., 1915, The boy who made $1,000,000 with a Toy. New York : Meccano Inc.

KING C.E., 1978, Grote geillustreerde speelgoodencyclopedie, (translated from English by T.Albarde, K.Brands and M.den Engelse), Alphen aan den Rijn : Septuaginta, p.164.

Weltens A., 1976, Mechanisch blikken speelgoed, Arnhem : Kosmos, 160 p.

REFERENCES :

(1) verbal information from interviews from ex-Distler employees and especially ex-member of the board, Mr ir. P. DUBOIS

(2) Dinky, from Dinky Toys, a product of Meccano Ltd., Liverpool, U.K.

DISTLER TOY
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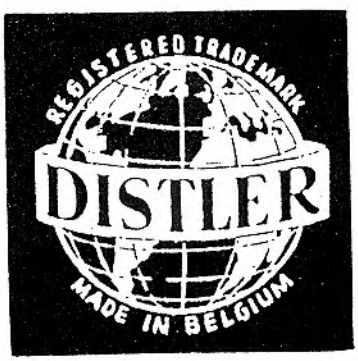
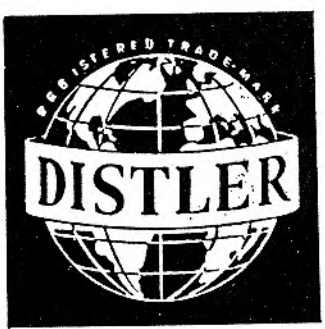
223.55

Distler

Fig 1. Different Distler's German and Belgian Logos.

Fig 2. Front cover with four language text of the general GIANT leaflet.





MADE IN BELGIUM.

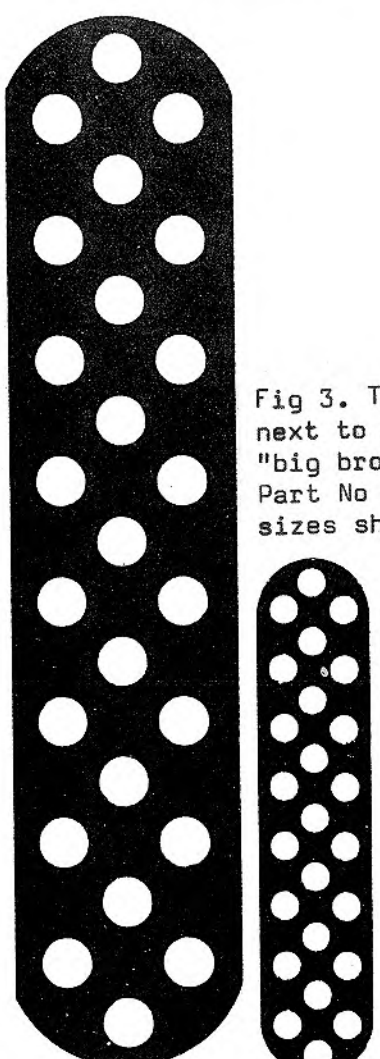
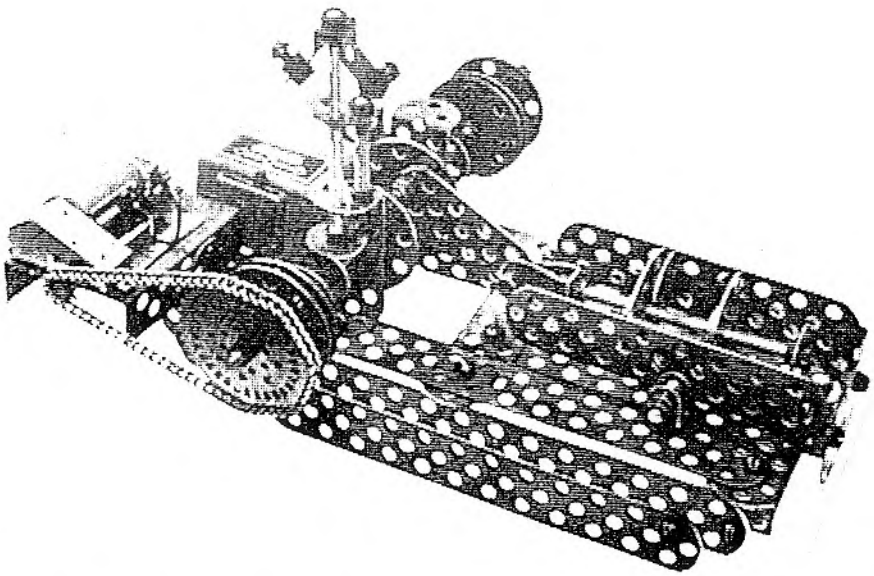


Fig 3. Trix Part No F9 next to its equivalent "big brother", GIANT Part No 5009. Actual sizes shown.

Fig 4. Distler GIANT metal constructional set No 22.511 with 106 parts, for the German speaking countries.



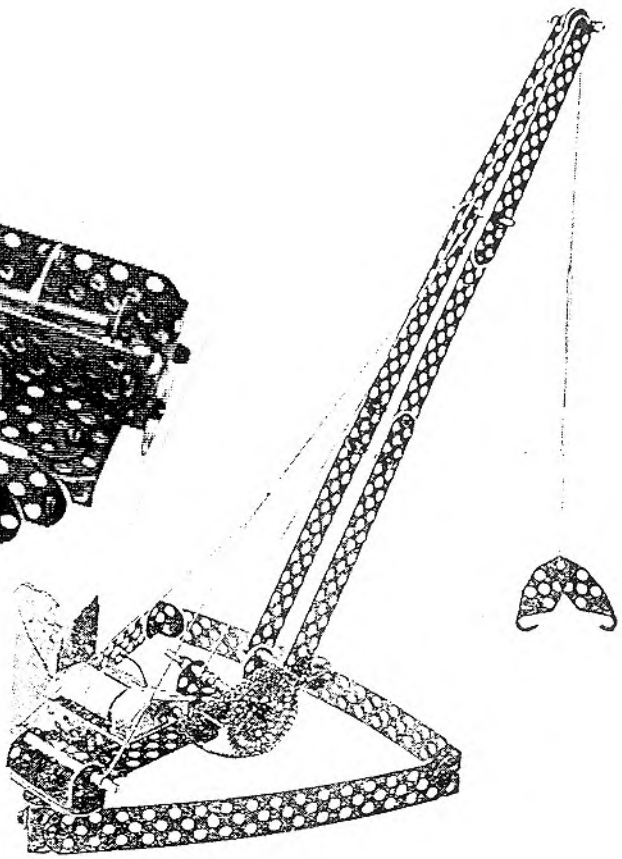


Fig 5-6. Model of a simple Derrick crane and a horizontal steam engine from a GIANT manual.

Fig 7. Distler GIANT, larger metal constructional set No 5000 with 139 parts, in a well presented nice and practical box.

GIANT

Fig 8. Front cover of Electromatic driving set No 5001 manual.

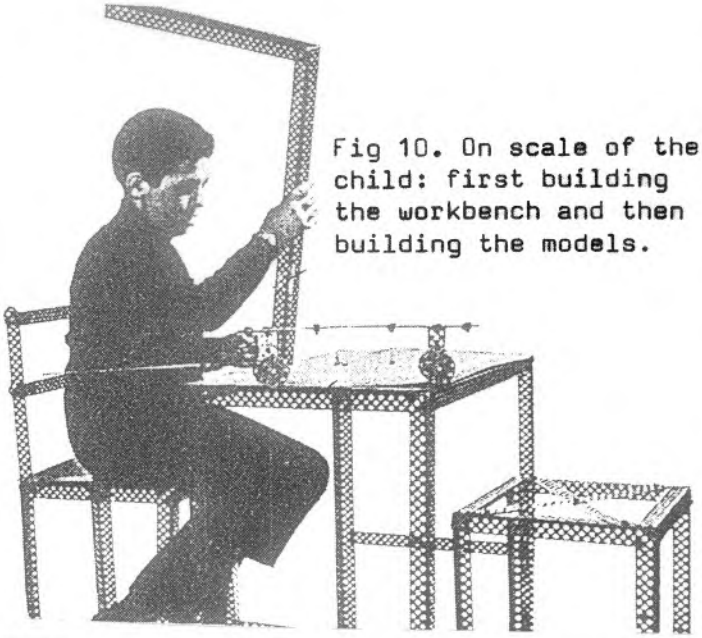


Fig 10. On scale of the child: first building the workbench and then building the models.

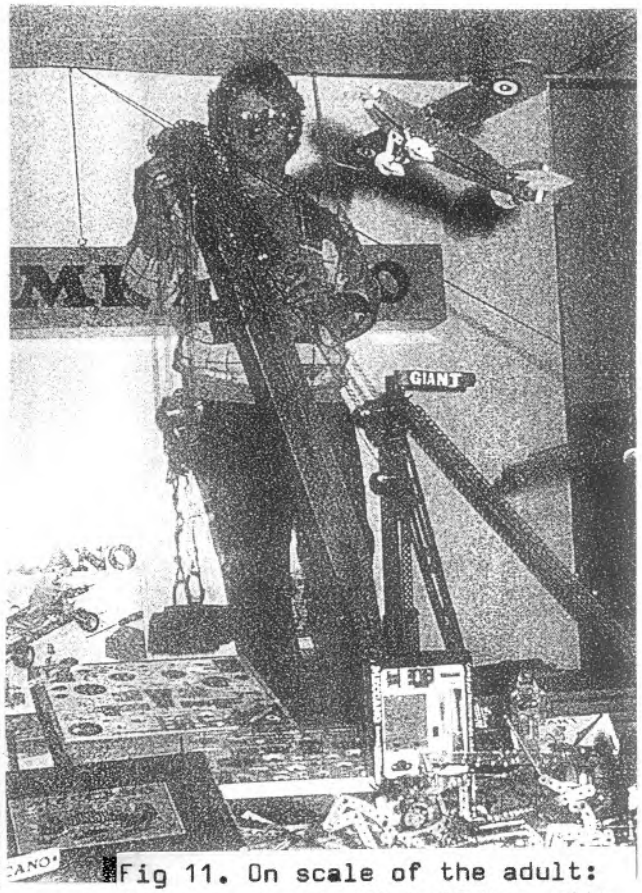


Fig 11. On scale of the adult: large scale model building with GIANT. Model of a Derrick crane on permanent display in the Belgian Toy Museum. The model's weight, complete with load and counterweight is approximately 110 pounds.

Fig 9. GIGANT-electromatic: electrical driving unit with the famous Distler micromotor.

NEW SYSTEM. Elektriskais Konstruktors <Skolnieks> 3 from Keith Cameron.

This electrical kit is packed in a box about 12"x12" with a partitioned plastic insert and contains the following:

1 3"x5" Drilled wood base
2 5-1/2"x2-1/2" plates of compressed board
1 horseshoe shaped core
1 wound electromagnet
1 1-1/4" core for electromagnet
1 bell, 2-1/4" diam
1 8-1/2" dowel
3 small lamps and holders
4.5v flat-style battery
Spanner and screwdriver
2 5 hole strips
4 3x1 hole DA Strips

Plastic box with small parts:
12 nuts and bolts
20 washers
4 angle brackets
6 connecting posts
6 connecting lugs
Pre-stripped wire lengths
3 springy metal strips

The box label and manual are bi-lingual, in Cyrillic and a language unknown to me. The screwdriver is called a 'skruvgriezis,' the spanner is an 'uzgrieznu atslega.' The manual has a full list of contents with illustrations of each part and of the box layout. There are 21 experiments including variations of series and parallel connections of lamps and switches, double throw switches, and electromagnetism including a working bell. The set was the kind gift of NZ Meccanoman, Mike Stuart, who had bought it while in Poland.

A DISTLER GIGANT 22511 Set MCS gives details of all the GIGANT range except this one. A blurry picture of it is shown in 2/13 and a similar colour one will be included among this Issue's web colour images. The details below are taken from a Set which David Hobson kindly lent me. The GIGANT (GIANT is the English language name) parts are similar to TRIX but roughly twice the size in all directions, with 6.4mm holes at 16.0mm pitch. So, unique, formidable parts, and a 17h Strip weighs about 60g (2oz).

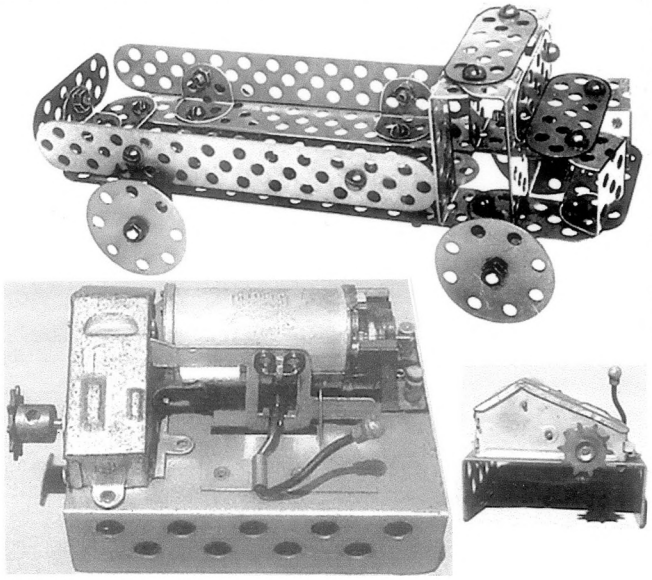
The end-opening **box** is made of corrugated cardboard, & measures 31*44*4cm. The label is white with blue lettering & a multicoloured picture. The Set No. is on the underside of the box together with '1 DISTLER-GIGANT D236'. The parts are in a grey moulded plastic tray, with the N&B in a similar box (the 'plate' top left in the OSN 2 view is the top of it).

The contents are given in the manual: • 12 each of 5,9, 17h (along the centre line) Strips, & 6 of 13h. • 6 each of the DAS (1½*½+3+½*1½h) & Double Bracket (1½*½+1+½* 1½h). • 12 A/Bs. • 2 each of the 1 & 2h high Small Double Brackets (all missing). • 12 Discs, 55mm Ø; 6 Large Washers, 26mm Ø; 3 Small Washers, 13.3mm Ø. • 4 black plastic Tyres, 86mm o.d., with radial tread between a circular ridge around each sidewall, towards the bottom, & 2 centrally on the top. • M6 threaded parts. Brassed Screwed Rods, 12x 115mm long, and 6x 55mm. 110 machined Nuts, 9.8mm A/F & 4.9mm thick. 80 RH Bolts, 10.0 Ø & 12.3mm u/h. The finish of the N&B is black metallic although many look like plain steel, or in between. • 2 Spanners 118mm long o/a, with 6 holes in the handle, and a wire Screwdriver (missing). • 2 Hooks, 72 mm long.

Apart from the Tyres and the N&B, all the parts are painted a lightish blue metallic.

The manual has 16 unnumbered pages, including covers, 222*156mm deep. It is all in B&W on art paper with photos of the models. The cover is like the MCS one, with the boy and Mobile Crane shown bottom right in 2/14, except that the text above the logo is DISTLER-GIGANT-GROSS-ELEMENT BAUKASTEN. No mention of the Set No. is made anywhere. After a brief Intro on p2, and the Illustrated Parts/Set Contents on p3, 30 models are shown, with, a single photo for 27, and two each for the other 3. There is no text or model names. The first model, on p4, is a Shelf Unit with 3 shelves made from (presumably) card, and the last, on p16, is another view of the Crane on the cover. It is by far the best model, and the only one that uses the Tyres – the others are much simpler, small TRIX-like models, Hammers, Buffers, Scales, a Puppet, etc. The Steam Engine & Derrick shown in 2/14 (but without the Motor drive) are among the best, plus perhaps the Lorry below - it would be about 11" long. Clearly, apart from the Mobile Crane the models don't represent the Set's potential.

In passing the Motor isn't shown very clearly in MCS & OSN, so below the Lorry are 2 views of it. The grey metal cylindrical motor drives into the bright metal cased gearbox, and both are mounted on a blue flanged plate, about 6cm wide & 8½cm long. A 10t TRIX-style gear is on the output shaft, and the terminals, and what may be the brush unit, are at the right end of the motor. The lever at the front is no doubt to change gear, and a reverse function is also mentioned in OSN 2.



Another MICKEY MOUSE Set Kendrick Bisset has kindly sent details of the Model A outfit. The photo below shows the container, blue & white on red; part of the white on blue Model Sheet; and most of the parts found in the set. The contents seem to be very similar to those in the Model S (see 24/713) but the bossed Pulleys and Axles are replaced by 1" Ø Pulley Discs (no doubt like those in the other MICKEY MOUSE sets), & ¾" Bolts for them to run on.

The parts found in the set were: 1 Large & 1 Small Flanged Plate; 6x 4" Strips; 6 Trunnions; 4 'Triangular' Strips (¾*1⅞"); 8 A/Bs; a Span'driver; 14 square Nuts (5/16" A/F), 10x ¼" & 4x ¾" u/h RH Bolts. The thread is 8-32, as expected. Compared with the 'S', extra parts are 2 each of Trunnions & A/Bs. Neither is needed for the models on the Model Sheet.

Said Sheet has 'Copyright 1947 by Hollywood Toycraft Inc.' at the bottom, and shows 12 of the 14 models on the 'S' version, but redrawn where appropriate to replace the Pulleys by pairs of Discs, convex sides outwards. An Axle was essential for one of the 'missing' models, and deleting the other made room for the centre text panel. This talks of the 'S' & 'L' sets being available at $1.69 & $2.95, and having enough parts (including Tires in the 'L') to build over 50 & 100 models respectively – very many more than on their Model Sheets.

DER KLEINE ELEKTROTECHNIKER This German name for the MEHANO Electrical Outfit was mentioned in 22/645 & sets bearing it have now been seen. On the boxes the letters in the 3 words are equal in height, but in a different lid shown on the Mehano web site 'DER KLEINE' is in tiny letters. The English name given there is THE YOUNG ELECTROTECHNICIAN, which does sound rather better than the previous THE LITTLE ELECTROTECHNICIAN.

As with the MEHANO set (see OSN 22), the earlier, similar MEHANOTEHNIKA Electrical Outfit was sold under a number of names, and examples now known are THE LITTLE ELECTROTECHNICIAN (on an English manual), ELEKTRO-PIONIR (German), PIONIR ELEKTRO (on a Yugoslavian manual), & DEN LILLE ELEKTRIKERN (Dutch). The Set Contents in the 2 manuals referred to above are as in MCS, except for the PNs of the Connecting Wire (35 & 36 instead of the 39 & 40 in MCS), but the parts and their names are shown together, and the illustrations of some of the parts differ a little.

A leaflet in German advertising the ELEKTRO-PIONIR set is dated 1964-65.

reasonable considering the size & nature of the set. Those for the Nr.0 are most of the rest of the Nr.0 models in the 0-3 manual but in a different order & with different model numbers. At the end are a few models from the larger sets.

SUMMARY OF 0-3 MANUAL •Name: Olympia •Details of maker: none. •Dates &/or Ref Nos: TRPT-Nr.6024/52 on C3; III/19/1 – H243 – 10 – 6161 on C4. •Page size: 210*148mm. •No. of pages: 32 inc covers. •Language: German. •Printing: models: shaded line drgs, blue on white with red text; cover, left. •Page Nos. of Illustrated Parts & highest PN: 6-7, 35. •Page Nos. of Set Contents & highest PN: 4-5,40. •Sets covered: 0,1,2,3. •No. of models for each set: 15,79,3,3. •Name, Model No., Page No. of first & last model of each set: 0: Warnungs+ tafel,1,8; Rolltisch,15,12. 1: Bett,50,13; Windmühle mit Hammer,78, 24. 2: Säulenbohrmaschine,200,25; Doppelständer-Exzenterpresse, 202, 27. 3: Brücke,300,28; Fahrbarer Brückenkran, 302,30. •Other notes: Intro & details on pp2 & 31. Model 310 should be 301. An identical manual doesn't have the C3 Ref. No., & the C4 one is III/19/1–12/451–1351. A 4-page leaflet in Russian has the 'circular' OLYMPIA name on the front (with О лимпия under it), the Set Contents on the inside pages, & the model names on the back.

SUMMARY OF 00-0 MANUAL •Name: Olympia •Details of maker: none. •Dates &/or Ref Nos: III/19/1–10/451–1352 on C4. •Page size: 146*100mm. •No. of pages: 36 inc covers. •Language: German. •Printing: models: shaded line drgs, blue on white with red text; cover, similar to the 0-3 above but with a 'circular' name top left. •Page Nos. of Illustrated Parts & highest PN: 8-9, 35. •Page Nos. of Set Contents & highest PN: 6-7,40. •Sets covered: 00,0,1,2,3. •No. of models for each set: 25,10,5,1,1. •Name, Model No., Page No. of first & last model of each set: 0: Warnungstafel,1,10; Balance,25,23. 0: Sägebock,26,24; Rolltisch,35,28. 1: Lastkraftwagen,65,29; Bett,50,13; Windmühle mit Hammer,78,32. 2: Doppelständer-Exzenterpresse,202, 33. 3: Lastkahn, 301,34. •Other notes: Intro & details on pp2 & 35.

A DISTLER GIANT No.5000 Set David Hobson kindly lent me his recently acquired set, apparently complete & unused.

The sturdy **box** measures 52½*39*5cm and weighs about 6kg. It is white, printed in blue & black, and the lid, with a boy & a Mobile Crane, is shown in 2/14. The Set No. isn't anywhere on the box. The parts are housed in a white moulded tray with a transparent lid; the N&B are in the same type of clear box as in the 22511 outfit (see 27/808). There is no obvious place for the Feet (for the A/Gs) in the box but there is room for them under the longer A/Gs.

The **contents** are as in MCS except that it has 12 A/B, the quantity given in the manual with the Set. On the other hand the Manual gives 2 of the Perforated Spanners against one in MCS, and in the Set (plus a 'Black' Spanner, see below, in each case). The number of the Tyres, 4, isn't given in MCS. Essentially the 5000 is the 22511 plus: 12,4,4, of 17,19,25h Strips, 2,6 of 13,20h A/Gs, 4 Feet for the A/G, & the 'Black' Spanner.

The **parts** not seen before are: • The **A/G**, 33*34mm o/a with corner radii of about 5½mm. • The **Foot** for the A/G, 44*45*13½mm o/a, pushes onto its end and is moulded in grey plastic with DISTLER on the bottom web. • The nickeled **Screwdriver** is shown below, the wire is 4mm Ø & it is 117mm o/a. • The single-ended **Black Spanner** below it can be seen in MCS – it is a commercial drop-forged item, 115mm long, with a chemical black finish, and is marked WEST GERMANY, DIN 894, & 10 (the jaw width)

The **manual** is identical to the one in the 22511 Set except that GIANT replaces GIGANT throughout (though the text remains in German), and the appropriate illustrated parts/set contents are given on p3 (and stated to be for the 5000 outfit). None of the models use the A/Gs in the Set. However there was a **leaflet** with the Set which shows the parts/contents of all the sets except the 22511, and a small selection of unnamed models for each. (It isn't explained anywhere but the Giant 2 models shown need Sets 1+2 and the Giant 3 models Sets 1+2+3.) There are 17 models on one side from a Chair to a Double Swing, and 9 on the other from a Low-Loader Trailer to a Derrick Crane. There is one photo of each and though not spectacular, most are generally better than the Manual models. The finer points of the larger ones can't be seen in the photos. The Mobile Crane & Mechanical Hacksaw below (full-size) are among the more interesting models. The screw-operated luffing in the Crane relies on the flats of a Nut fitting closely between the arms of a U-Bracket.