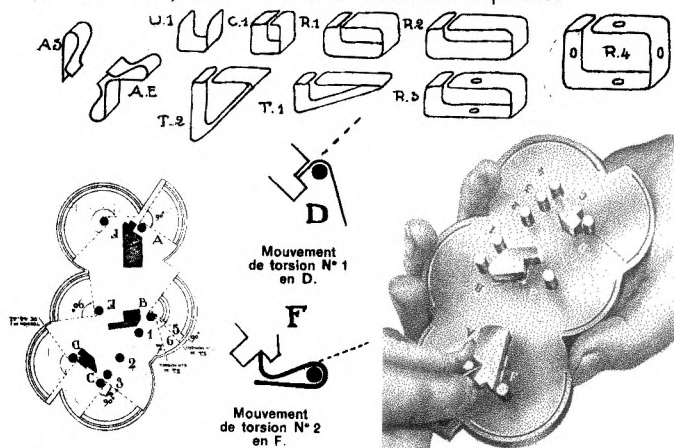


CONSTRUC Mention was made of this unusual, post-WW2 French system in 16/444 and now, thanks to Jeannot Buteux/Constructorama and Jacques Pitrat, more details are available from copies of pages from a manual. The system is known from 1948 and its name was registered in 1947. Model frameworks are made from Brackets and various lengths of polished steel Strip, held together by spring Clips. And the Brackets and Clips are made by the modeller from similar, special Bracket & Clip Strips, using a Bending Jig supplied. In addition there are a small selection of Plates, Wheels, Axles and so forth, making about 35 parts in all.

The Parts • The Strips are 10mm wide and the 6 meant as the main structural element range from 40 to 450mm in length. They are not meant to be bent up into Brackets, etc. All the Strips are marked with their PN. • The 2 Clips and the Brackets are shown below, also the Jig, and (in the centre) how to use it to make the Clips AS.



The Strips used for these parts can also be used as structural elements. Axles run in the holes in Brackets R3 & R4, and presumably the Strips from which they are made are supplied with these holes ready punched, although no holes are shown in them in the Illustrated Parts.

• The other parts that can be seen in the models are a dish like Flanged Plate about 60mm square, Road & Flanged Wheels, 2 lengths of Axle, & a wire Axle Clip. • Other parts not illustrated include: additional lengths of Axle including 200 & 450mm; a Crank Handle (see the Crane in OSN 16); 2 Pulleys; a Driving Pinion; a Crown Wheel; and a Collar. • The following parts are listed but I'm not clear what they are exactly: 2 Plates (Plaque Fixe & Plaque de Rotation), with 2 of each in the largest set; 'Chaînette 2 Maillons', literally 'Small Chain, 2 Links' - there are 2 or 3 of these in several of the sets; and 8 'Éléments Modèles' in the basic Set I - perhaps these are ready made Clips and/or Brackets to encourage the faint hearted.

The Sets The sets are not progressive. First there are 3 basic sets, Boîtes Nos. I, II, & III, with, apart from structural parts, the Jig & 4 Flanged Wheels in No.I; 4 Flanged & 6 Road Wheels in No.II; & the 'mechanical' parts in No.III.

Each of those outfits cost 10 francs, and at 5 francs were add-on Boîtes complémentaires Nos. I & II with more structural parts and 4 Wheels in each, Flanged in the No.I and Road in the No.II.

Then 3 Boîtes de réassortiments (sets of extra parts), again at 5 francs each. No.I has 80 Strips for Clips; No.II, 162 Strips of all types; and No.III, 5 Strips to make Bracket R.4, 38 Structural Strips, and one of the 450mm Axles, not included in any other set.

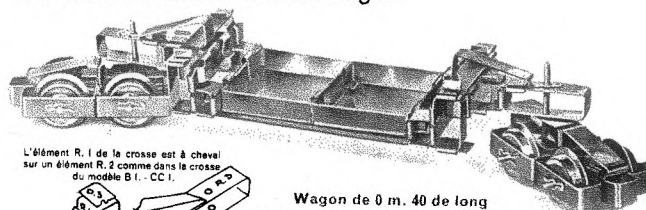
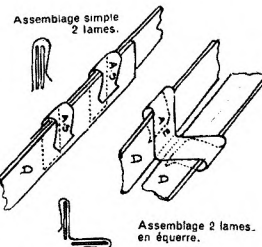
Later these last 3 sets were replaced by 2 at 10 francs each: No.I with 150 Strips for Clips, plus 72 other Strips various, and No.II with the 450mm Axle, 6 Strips for R4, and 76 Structural Strips.

A Boîte No.5 is mentioned on a page about models but is probably a misprint.

The Models The basic method of construction is very

simple with Strips and/or Brackets held together side by side with the Clip AS, or at right angles by AE. The Instructions advise generous use of Clips and extra Strips for additional strength and rigidity.

For each model there's a photo, a parts list and some sketches showing how the parts are assembled. All is fairly clear for the 40cm long Railway Wagon below, made from Set I plus add-on Set I, but the Lorry, from Sets I + II, is a bit of a puzzle, even with all the sketches - there isn't room for them here but they will be included in the MCS Extra Pages.

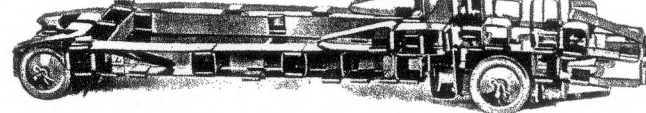


L'élément R. 1 de la croise est à cheval sur un élément R. 2 comme dans la croise du modèle B.1. - CC 1.

Wagon de 0 m. 40 de long monté sur 2 boggies à 4 roues, exécuté avec une Boîte N° 1, plus une Boîte complémentaire N° 1.

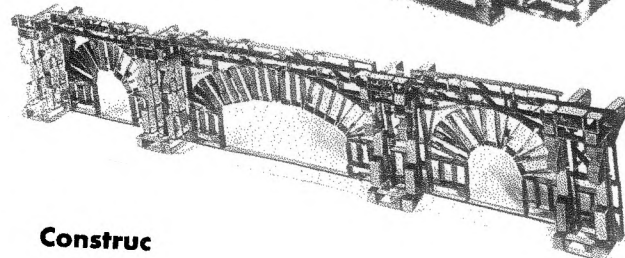
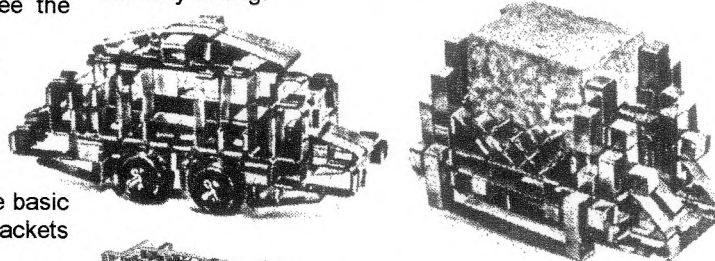


CUVETTE: Croquis montrant bien la position des lames D. 3 de consolidation et fixation.



The models are mainly Railway Wagons (for Gauge 1 track) and Lorries, usually with a flat load platform. One Wagon with superstructure is shown below, and under it a Bridge that is in the manual among a page of unnamed models to show what can be done with extra sets. Most of them are recognisable, more or less, but what is the one below right?

The last word to Jeannot, 'CONSTRUC is of little interest, being too intricate, and the models are neither realistic nor very strong.'



Construc

MYSTERY PARTS No.22 This is the Braced Girder with the rectangular cutouts shown in 10/259. As explained in the article on EPA in this Issue, it may well belong to that system.

No.39 The 6h Braced Girder from Spain, with the small solid diamond in the centre (19/533). Don Redmond asks if this could be an early (1928-35) METALLING part. Perhaps the Liverpool asymmetrical design was not to their taste.

CONSTRUC Sets Some notes on this unusual French system appeared in 21/599, and it will be recalled that structures are made from unperforated Strips, some of which are formed into Shapes (called Brackets in OSN 21) using a Jig supplied. The parts are held together by Clips, also made from Strips using the Jig. Now a little can be added to the earlier account from a No.1 set to hand, plus notes kindly sent by Jacques Pitrat on his No.1, and a very much larger Lux outfit, thought to be complete. Some of the material from Jeannot Buteux used in OSN 21 will also be mentioned.

The No.1 Sets

MY SET. The box measures 16½*21*2½cm and has the lid below. Inside it has one partition, stapled in.



FIG.1

The Parts The Strips are bright springy steel .4mm thick. They are 12.7mm wide except that #AS & AE (used to make the Clips) are 9.6mm. Each Strip is stamped with its letter code. The Strips which are intended to be used to make the Shapes (they, and the Clips, are shown in OSN 21) can also be used as flat parts, and the others (D1-9) which are usually used flat can be bent to form brackets, etc as required.

The Set seems to have been carefully looked after and may therefore be near complete. All the parts in it are listed below together with the quantities found in curly brackets, and the length of the various Strips. (The quantities of Shapes include one of each found perfectly made in the Set, probably by the factory.) The other parts in the system are discussed later.

- Strips AS, AE, 32,62mm long. {42,16}
- Strips D1,2,3,8,4, {4,15,2,7,4,} 40,54,70,108,175mm long.
- Strips (for Shapes) C1,R1,R2,R3,T1,T2,U1 {7,11,6,5,3,3,5} 54,80,108,108,98,96,36mm long. (the holes in R3 which serve as journals for the Axles are 4.0mm Ø.)
- Tray, tin plated, 55*55mm overall with 12½mm deep flanges. {1}
- Flanged Wheel, 30mm Ø, tin plated with an untapped zinc die-cast tapered boss. {4}
- Axle, 3.5mm Ø, 48½mm long with 2 grooves at each end for Wire Clips which locate the Wheel. {2}
- Wire Clips 15mm long. {10, but only 8 needed}
- The Jig is a die-casting with steel pins, and its top face has 'CONSTRUC | SURESNES SEINE | BREVETE S.D.G.D.' cast into it.

The Instructions Rather than the manual (called Album) mentioned in OSN 21, this Set contained only a 'Notice Explicative', folded to fit into the box. It is in French with 12 unnumbered pages 247*165mm plus covers. It is printed in a reddish-brown on pale beige and the main panel of the front cover (Fig.2) is identical to the Album cover except that the latter has 'PRIX DE L'ALBUM 3^{FRS}' under the name. C1-p4 contain an introduction plus notes on how to use the Jig and combine the Shapes, with a photo of the Strips & Shapes on p2. Then 3 pages giving detailed instructions of using the Jig to make the Shapes, followed by 6 models on pp8-11. Each has one or two



FIG.2

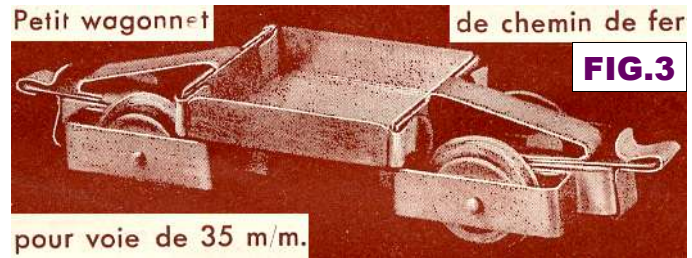
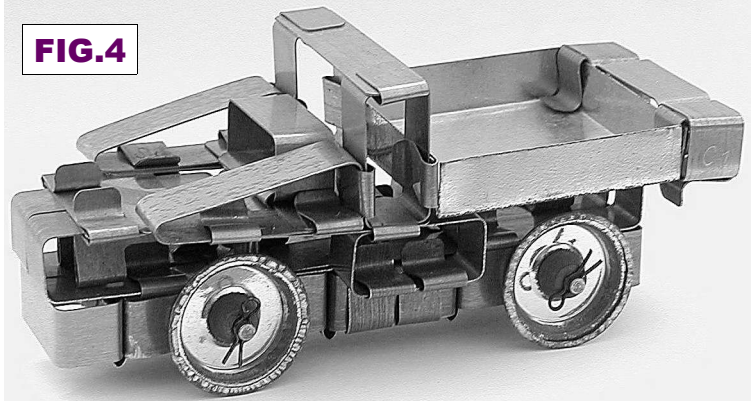


FIG.4

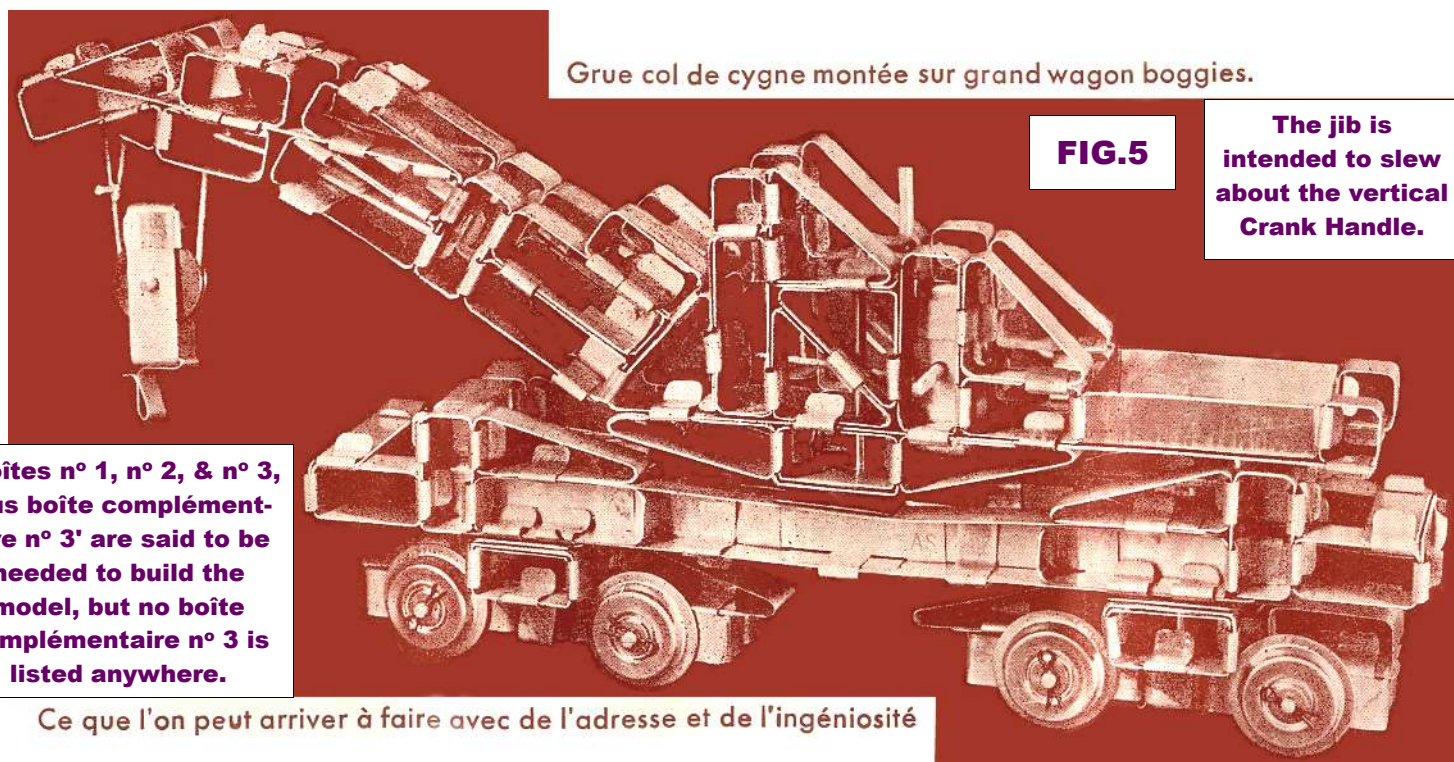


stage-by-stage constructional details but no list of parts. The first is shown in Fig.3, the second is another Wagon for 35mm track; the rest are various commercial Vehicles with the model I made, one of the two largest, above, though it is shown in the Notice with Road instead of Flanged Wheels. p12 has the model in Fig.5 which it is said can be made with skill & ingenuity (plus, though not mentioned, a great many more parts). C3 has small photos of 6 large models, including the Fig.5 Crane, with mention of the sets needed to build them, and C4 lists the 8 sets in the system with a short description of each.

Using the Parts The instructions for making the Shapes are clear and with one exception the Jig works very well, though some of the bends need quite a lot of force and it's very hard on the fingers. I think most pre-teens would need some help. The only problem was that the Clip AS was unusable unless prior to the first bend the Strip was withdrawn by 2½-3mm from the fully home position (shown at 'D' in OSN 21).

Building the model was a different matter: the photos didn't show enough detail, the order of assembly was critical, and in some areas I don't think the model could be made exactly as shown. But after considerable exercise of (what remain of) the little grey cells the finished model looked more or less as in the Notice, even if it was clipped together rather differently. It was surprising quite solid and there was no danger of parts falling off when played with, or with reasonable care, of their even being knocked a little out of place. Has anyone made a large model? I thought to attempt a larger model using more of the parts in the Set but couldn't face the mental effort in trying to imagine how all the pieces could fit together.

JACQUES' No.1 looks identical except that many more of the Strips have been made into Shapes. Most look neatly made



Grue col de cygne montée sur grand wagon boggies.

FIG.5

The jib is intended to slew about the vertical Crank Handle.

'boîtes n° 1, n° 2, & n° 3, plus boîte complémentaire n° 3' are said to be needed to build the model, but no boîte complémentaire n° 3 is listed anywhere.

Ce que l'on peut arriver à faire avec de l'adresse et de l'ingéniosité

but some show defects and so it's not clear how many were factory made.

The LUX Outfit

The box is red, measures 47*285*95mm, and has one tray. The sides of the box are wood, the bottom, tray, and lid are cardboard, the latter held shut by two catches. The label is about the size of the No.1's and is glued into the top left corner of the lid. Its design is the same too except that there is no line of text at the bottom under the name, and the text in the top left corner is different. Said text is headed: CONSTRUC-LUX (in quite small letters) | Coffret Général | PLUS DE 1.000 PIÈCES | dont 270 éléments à former (of which 270 parts are formed). Underneath is mention of models and some of the parts in the Set, and also that it included an Album with numerous models and a Mode d'Emploi. Neither were with the Set but probably the latter was the Notice mentioned earlier, or something similar, and the Album was most likely the one in OSN 21, although none of the models in it do justice to the number of parts in the Set, and towards the end it was said that a complementary Album would follow. Finally on the label, the price, 'Frs: 115'.

The underside of the lid is blue, as is the bottom of the box and the tray, both of which are partitioned. The over 1000 parts in the set include all those in the three basic outfits, and many more besides. Many of the partitioned areas are filled with a large number of closely packed ready-made Shapes, and a jumble of ready-made Clips, in all probably the 270 mentioned on the lid. From the layout of the partitioning it is certain that all the Shapes were factory made.

The Parts Apart from Strips D5,6,9, (lengths: 200m, 450mm, & about 270mm), and Strip R4 (about 140mm long with 4x 4mm holes), the parts in the Lux but not in the No.1 are shown in Fig.6, plus parts in different colours and, for reference, the Axle in the No.1 (above the short Axle). There follows a list of the 'new' parts in the Set, with quantities in curly brackets:

- Tabbed Plate 'A' {2 green, 3 bright}; Flat Plate 'B' {4}. The main use of these parts is in slewing Cranes (see Figs.7,8 overleaf, in which 2 of each are used) – the semicircular slot in 'A' is a mystery.

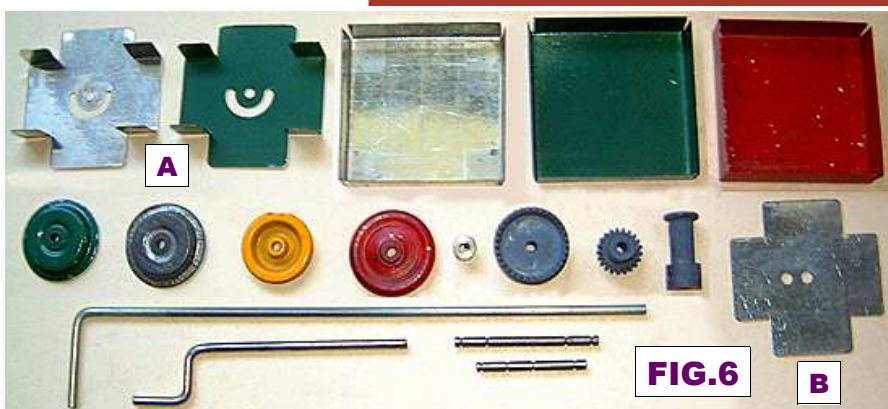


FIG.6

B

- 'L' Axle, 20cm long {1}.
- 21t Pinion & 31t Contrate {1 each}.
- Winding Drum (next to the Pinion) {1}.

The Gears & Winding Drum are cast and are single-tapped for a Set Screw.

- Collar. Nickelled, and also single-tapped {2}.
- Road Wheel, red {10}. • Pulley, yellow {3}.
- Crank Handle {3}.
- Short Axle {6}.

The other parts, apart from Strips, Shapes, and small parts (still in 4 little transparent packets) are:

- Tray {2 red, 2 green, 1 bright}.
- Flanged Wheel {8 green, 8 bright}. The 2 colours for this parts, and for example, the Tray, may have been to allow 2 models of somewhat different appearance to be made at one time.
- Axles {8}.

A Slewing Crane

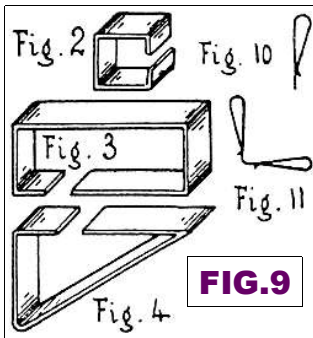
The instructions for this model, one of the most advanced in the Album, are shown overleaf, with the photo full-size and the sketches at about 75%. The tower, called Le Pivot, has 4 built-up angle girders at its corners and the slew bearing is provided by Tabbed Plates at the top of the tower and on the bottom of the jib. The 'L' Axle passes through a Flat Plate at the bottom of the tower & one on top of the jib's main members. The Gears are the bottom of said Axle while its short arm sits on top of the Flat Plate, but what it engages with isn't clear. The Winding Drum isn't shown on the Crank Handle in the sketch bottom right. The 'L' Axle would have to be the 450mm part

but curiously the Lux set has only the 250mm size.

History

The Company The Album has 'CONSTRUC, 9 Rue de la République, Suresnes (Seine), Téléph: LONGCHAMP 14-97' and 'Fabriqué à Suresnes (Seine)' on its back cover; the Notice has Fabriqué par Ageteo-Crebert at the same address & phone number. The 'C' of Crebert though may have been a misprint because a Google search found a UK patent 455178 of Oct. 1936 in the name of Établissements Ageteo-Grebert at the same address. (The patent is about an improved metal strip for packaging, and the convention date was 30/1/34.) Nothing is known for sure as to how long CONSTRUC was made but it was long enough for there to have been a few changes to the range of parts & to the sets.

The Patent David Hobson kindly sent a copy of a UK patent 439863 which was applied for in March, 1934 but was marked 'Specification not accepted'. No doubt there would be an equivalent French patent or application. The patent was in the name of Philippe & François Leblanc of 17 rue des Acacias, Paris XVII^e and clearly shows the Clips and 3 of the Shapes used in CONSTRUC (right). Also in the patent a number of other Clips & Shapes along similar lines. It was envisaged that the Shapes would be made by the builder and a jig for this purpose was shown. It is quite different to the CONSTRUC part and basically allowed bends to be made with the bend angle shown by a pointer



Grand Modèle

Hauteur 0,55

Portée 0,45

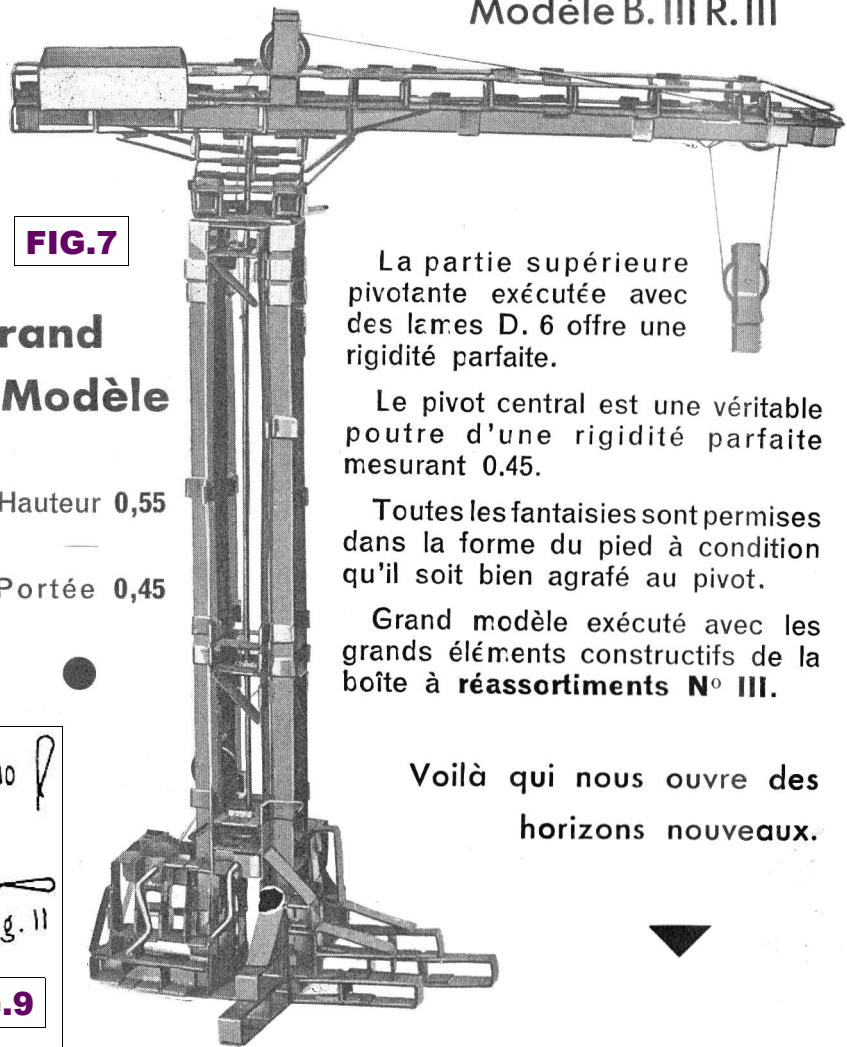


FIG.7

La partie supérieure pivotante exécutée avec des lames D. 6 offre une rigidité parfaite.

Le pivot central est une véritable poutre d'une rigidité parfaite mesurant 0.45.

Toutes les fantaisies sont permises dans la forme du pied à condition qu'il soit bien agrafé au pivot.

Grand modèle exécuté avec les grands éléments constructifs de la boîte à réassortiments N° III.

Voilà qui nous ouvre des horizons nouveaux.

moving over a protractor. The only CONSTRUC feature not mentioned is holes in the Shapes for Axles – in fact there is no mention of wheels at all, & the only model shown is a Bridge.

CONSTRUC before WW2? It was said in OSN 21 that the

Détails de construction Grue

Modèle B I. et B III. - R II.

Pièces nécessaires :

144 - A. S	6 - T. 1
21 - A. E	14 - T. 2
8 - C. 1	3 - D. 2
44 - R. 1	1 - L. R. 2
21 - R. 2	2 - D. 4
4 - R. 3	12 - D. 5
5 - R. 4	

Croquis B
Bloc à monter séparément avant encastrement
Boîte d'accouplement des pignons.

Support de treuil.

Plan de construction du pivot.

Support de poulie folle à l'extrémité du bras pivotant.

FIG.8

Accrochage au pivot.

Accrochage à la base.

Ordre de marche.

Construire séparément le bras pivotant et le pylône central dit pivot.

Quand vous aurez assemblé avec les agrafes A. E. les angles du pivot, assembler la partie supérieure du pivot avec sa plaque de rotation (croquis A) et introduire entre chacune d'elles l'assemblage mécanique (croquis B) d'un seul bloc par le bas et le fixer avec des agrafes A. S.

Lui ajuster ensuite une base dont vous avez deux exemples sur les photographies.

CONSTRUC name was registered in 1947 but despite this it seems likely that CONSTRUC was on the market before WW2. Jacques has pointed out that the price of the outfits in the Album, Fr.5 & 10, and that of the Lux set, Fr.115, point strongly to prewar. Likewise the cost of the Album at the time, Fr.3. These prices are comparable with MECCANO in 1937: a Set 0 at Fr.32, an X1 at Fr.9 and a D at Fr.135. The earliest postwar MECCANO prices to hand are for 1953 when a No.0 cost Fr.695 and a No.0 manual Fr.50. Official figures show that prices rose by 200% between 1947 & 1953 and so the 1947 prices would be about Fr.350 and Fr.25. QED, but it might be thought odd that both of the only two Albums known have the 'prewar' prices in them. If they were issued postwar, then they must either have been prewar stock, or printed postwar unamended. In both cases the postwar prices could have been on a separate leaflet.

The First Parts? There is one indication in the OSN 21 Album of a possible first stage in the CONSTRUC story. The 16 Strips listed are labelled as would be expected but 4 of them, AS, R.1, R.2, & T.2, also have in brackets by them those PNS preceded by 'L.' So could it be that there were only these 4 Strips in the system originally? The 'L' probably stood for 'Lame', the word often used for the Strips in the manuals.

The Era of Sets I to III Whatever the date the range of sets given in the OSN 21 albums was: Sets I, II, III; add-on Sets I, II; extra parts Sets I, II, III. Then, as stated in OSN 21, the extra parts sets were replaced by Sets I & II (whether the addition of the serifs is significant I don't know). This replacement is known from Jeannot's Album in which a sticker with Sets I & II on it covers the original three sets.

The Era of Sets 1 to 8 The sets advertised on the back

page of the present Notice are from No.1 to No.8 and these no doubt replaced the previous 7, earlier 8, sets. They are thought later because the Strips D8 & D9 in the Notice were not mentioned in the Albums, and were presumably new parts. Perhaps the change happened after WW2. No prices are given and that might be expected in the postwar inflationary period.

Now to compare the new 1-8 range with the contents of the earlier sets as given in the MCS Extra Sheet (the contents of Sets 1-8 are only given in general terms in the Notice). In what follows the number of models quoted are those for Sets 1-8 in the Notice. • **No.1** has the Jig and more than 150 parts for 8 models. The earlier No.I had 134 parts. • **No.2** has 190+ railway & motor vehicle parts for 23 models, against 180 parts in the No.II. Set II contained all the parts in the No.I except the Jig and so couldn't be used without having a No.I. • **No.3**, 130+ mechanical parts for 30 models including Cranes etc, against 140 parts in the No.III. Nos.III & 3 are clearly add-on sets and would be used with Sets I & II. • **No.4 & No.5** are add-on sets with railway & motor vehicle parts respectively, which in each case allows 13 more models when used with Set 1. These sets are probably similar to the earlier add-on Sets I & II. • **No.6** contains 'plaques de rotation' and other parts to allow, with Sets 1 & 2, 'belles réalisations' such as Models 18 & 35 in the Album. There was probably not an earlier equivalent to this set. The models in the OSN 21 Album were not numbered so this might indicate that there was a later version of the Album. • **No.7 & No.8** with 200+ & 70+ parts, are probably similar to the earlier extra parts Sets I & II though the latter contained the 450mm Axle and this isn't mentioned for the No.8.

CONSTRUC: S4

OSN 41/1242

METALLUS Bits & Bobs Browsing the Metallus web site I came across a few things that I didn't remember from 2007 (see 37/1112).

The changes included 2 new sets, one a version of the largest Berlin outfit described as 'MEC-read-green', which I guess means the parts are in Meccano's red & green, but there's no photo. The other is a set to make the rather unusual 'Red Baron' below (Fig.1), with wings from a Strip front & rear, and Cord lacing in between, and the prop driven from the twin tail wheels. It is said to have 248 parts and to cost €78.50, both of which I find hard to believe. The Berlin, with its 2713 parts, still costs a much more reasonable €614.49.

New to me among the parts are: • The Roller in Fig.2, supplied with 2 sizes of Bracket. • 8mm Axles, 8/4.1mm Hollow

Axles (normal METALLUS Axles are 4.0mm) up to 300mm long, and the 8mm Bearing in Fig.3, probably a ball race between the brackets. The only part I could find mention of with an 8mm bore was a 16mm o.d. Collar. • Narrow Strips and A/Gs up to 49h long, and a few Narrow Brackets. • 5, 11, & 17h Flat Curved Girders (Fig.4). • Several sizes of Flexible Triangular Plates in the form of isosceles triangles. • Cord in various colours and 1, 1.5, or 2mm diameter. • Various Battery Holders, some with switches. • A 6½" Ball Bearing with 16x 10mm balls (Fig.5). • 5 to 25h Girder Strips (Fig.7), of 1mm thick steel. • A Flexible Double Strip (Fig.6) which I thought might be a plastic hinge, but seems to be steel and can be set to any angle by bending across the narrow joining links.



FIG.1



FIG.2



FIG.3



FIG.4

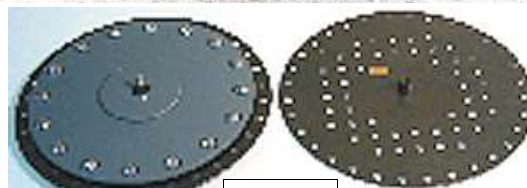


FIG.5



FIG.6



FIG.7

METALLUS: S5

OSN 41/1242