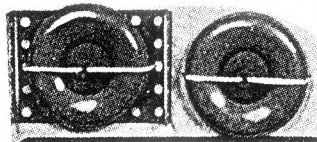


the Grab, and the large Gear Wheel under its chassis. Quite a few of the parts in MCS look similar to MÄRKLIN, and included in the Set Contents, though not illustrated, are a 95mm Pulley(?) Wheel and a matching Gear Ring, but the Gear in the Grab looks bigger than that. The hole spacing isn't given in MCS but from the dimensions of the parts in the Set Contents it must be 1/2" or very near it.

The 'moon' trade mark shown in MCS, with LUNA at the top, appears on the lid, and above the shop window is EDISON and UNIKUM.

EFEL A Leaflet shows the largest set, the No.7, made in the 1960s Martinaud phase. It weighs 3.28kg and the 503 parts are strung on 2 cards, in a box which measures 51*37*5.5cm. Several parts can be seen that weren't in the



No.5 illustrated in 5/90, notably 45h Strips and A/Gs, and what look like pressed balloon type Road Wheels (opposite), which scale at about 55mm Ø. There's also a long length, perhaps

90cm, of (plastic?) strip or something similar, which is coiled up with the ends held together by a N&B.

The other thing is that at the top of the Leaflet is 'Société Lyonnaise d'Etude, Fabrication, Exploitation, Lancements'. So the initial letters of the last 4 words explain EFEL. Was this organisation the manufacturer at the time? There's no mention of Martinaud who could I suppose have been the maker at a different period, or a wholesaler for EFEL, who also, from the order form shown in MCS, made toys as well.

ERECTOR A manual cover in French from 1920 (Code 292-5M-8-20) is similar to the U.S. cover of the time with a Bridge and 3 'undersize' boys, one of them sitting on the centre of the span. The wording is also similar but the references to Parts 2 & 3 have not been included, nor any prices. The New Haven and London (125 High Holborn) addresses are given. Another change is that models are said to be included for Sets 1-7, against 1-6 for the 1919 U.S. and UK editions I've seen. Also although most of the changes have been neatly made, the Sets covered and the French versions of the slogans look as if they have been typed in as an afterthought, and they are not quite in line with the other text.

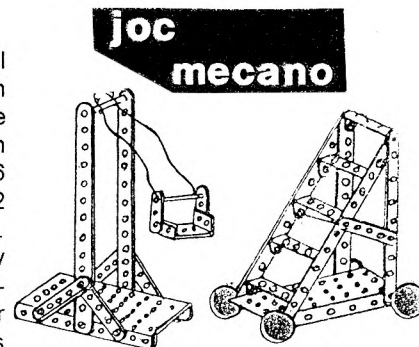
INGÉNIO The illustration on the manual cover of this 1920s French system is shown on the front of this Issue. Apart from that I have a copy of the Set No.10 model of a House, which is very similar to the one on the cover, and I'll include it in the MCS pages. As can be seen the main parts appear to be Strips, some short Flat Girders, possibly some A/Gs, and the Plate Girder with the 3 large holes in it - in the No.10 model it is shown with rows of 3 holes across its width, at each end and between the large holes. There are also presumably Panels which form the walls and roof of the House, unless they were to be devised by the model builder.

There was another French INGÉNIO system in the late 1940s but I don't have any details of it.

OSN 16

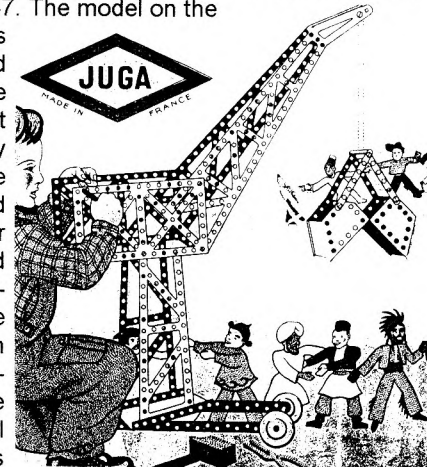
JOC MECANO

This was a small Rumanian system from around the 1970s. A page from a manual shows 16 simple models, and 2 are shown opposite. All are rather roughly drawn and this perhaps accounts for the lengths of Strips shown, with 3,5,6,8,9,11 & 13 holes, and Flanged Plates with, as examples, 3*7, 4*12 & 5*9 holes. Also shown are 1*3*1 & 1*5*1 DAS, Angle Brackets, and what looks like a small Flanged Plate used as the seat of the Swing.



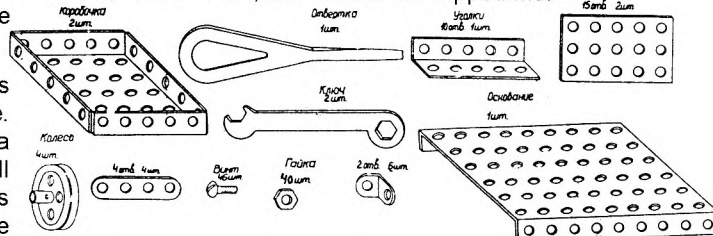
JUGA The name of this rather unusual French system was registered in 1947. The model on the

manual cover is shown opposite and the sides seem to be made from 3 different Braced Frames. They are spaced at the bottom by a Flanged Plate, but it isn't clear how they are held apart higher up. Notice the Strips in the undercarriage with their 2 rows of staggered holes. On the ground by the model are a pair of pliers and a large mallet. In the original, other models can just be seen as silhouettes in the background and include a Multi-Jib Crane, a Digger, and an Industrial Elevator.



KONSTRUKTOR-III The sheet I have on this Russian system shows the parts in just one set, and all of them except the Spanner are as shown for KONSTUKTOR [3] in MCS. But there are only 22 different parts instead of 48, and generally less of those that there are, compared with the 2 sets shown for KON [3]. There may well be some connection between the two systems although the names of a few of the parts are different and KON-III parts don't have PN's. It's just a coincidence that one is labelled [3] and the other ends in '-III' - in fact the latter may be a badly printed character which would transliterate as 'sh'.

Typical parts are shown below. Others are Strips with 3,5,7,8,10 & 14h; a 1*5*1 DAS; an Axle; a Threaded Rod; a Collar; and Hank of Cord. All holes are round. In all the Set contains 33 Strips, 4 Pulleys, 5 Plates, 6 Angle Brackets, and about 40 N&B. KON [3] parts are said to be aluminium in colour, or zinc plated, with 4.3mm holes spaced at 10mm; N&B are M4, but bosses are tapped M3.



KONSTRUKTOR-MEKHANI Another Russian system from around 1980. I say system though the model I have (on the next page) uses many specialised parts and I'm not clear whether other models can be built. The ringed numbers refer to detailed sketches which give a good idea of the construction. There are 2 Flanged Wheels at the end of each of the 4 arms coming out of the central base, and the whole Crane runs on rails. A Worm drive controls the

JUGA The name of this French system was mentioned in 16/445, and now Jacques Pitrat has sent photos and details of his set. There was no manual with it but Jacques included scans of some pages from one which Jeannot Buteux lent him. Thank you to both Jacques & Jeannot.

The name of the system was registered in 1947 and the set is believed to have appeared at about that time, soon after WW2. The words at the top of the lid right translate as 'It's for all of us to help to rebuild a better world', and there is a reference in the manual to the use of a digger & a bulldozer to clear rubble in cities destroyed by the war. There is nothing on the box or in the manual to indicate that there was more than one size of set.

The Set The box is 43*28*3cm and Jacques explained that the words at the bottom of the lid, 'LES COMPAGNONS DU TOUR DE FRANCE', evoke the image of highly qualified & conscientious craftsmen ('les compagnons du tour de France' originated in the Middle Ages when guild apprentices had to travel extensively to learn their trade before being accepted as a compagnon).

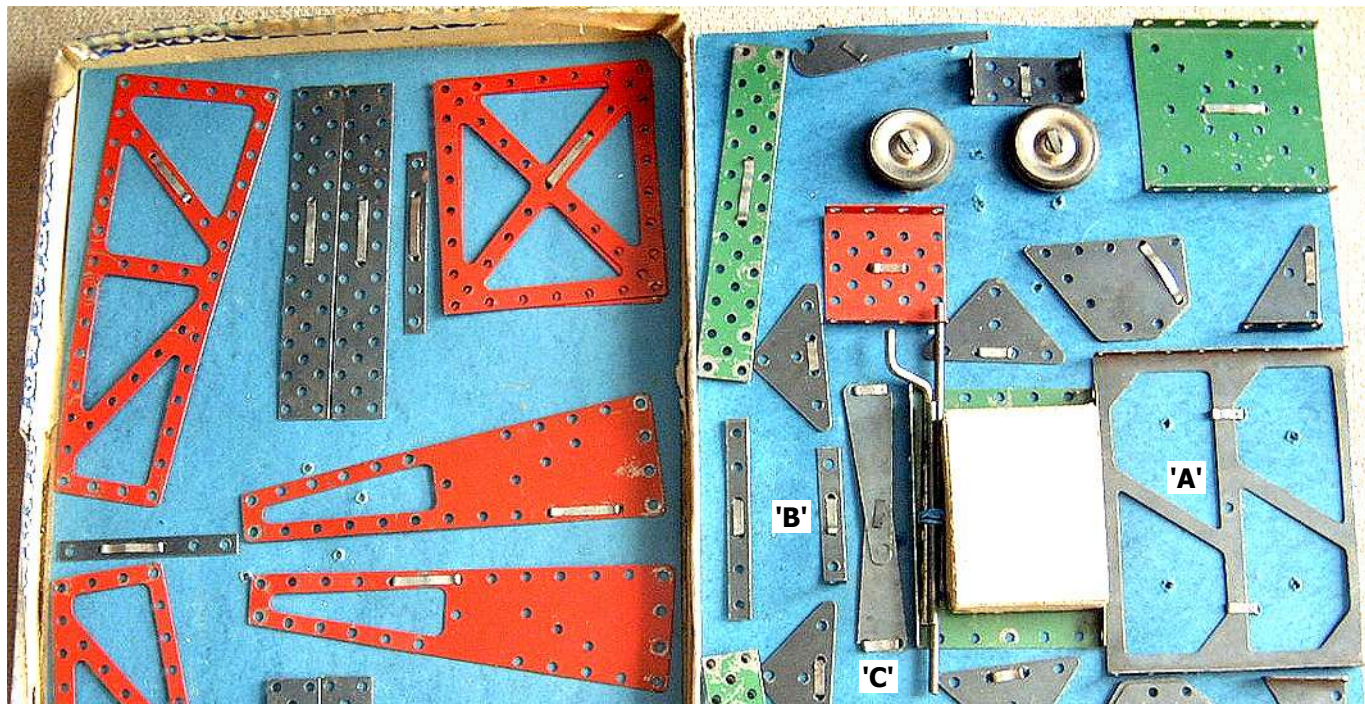
Below, the top 'halves' of the two layers of parts in the Set - the bottom halves are a mirror image save there is no Span'driver. The parts were loose in the box but have been replaced on the original backing cards with the original clips. They are though almost certainly not as originally arranged and in some cases there is more than one of the same part in a stack. The N&B and some small parts are in the white card box, and examples, all to the same scale, are shown in the composite photo far right.

The Parts All the metal parts shown except some Nuts and a Collar are steel. Those that look grey in the photos are actually black. Holes are 4mm Ø at 14mm pitch, and that would make the jib about 40cm long. A list of the parts follows, with my names, and a few notes about them.

- 2 each red **Inner & Outer Jib Frames**, 19 & 17cm long.
- 4 red, 10.5cm **Square Frames**.
- **Flanged Plates**. • 1 black **13*10.5cm**, 'A', with 8 holes in each flange. • 2 green **7.5*7.5cm** with 6h flanges. • 1 green **10.5*7.5cm** with 8h flanges. It is under the white box and its holes are those of the 7.5cm² Plate in the centre, plus a 5 hole row along each 7.5cm edge. • 2 red **5*5cm** with 4h flanges.
- 2 black **4.7*2.2cm** with 2h flanges.



- 4 green & 4 black 11h long **Strips**, 15*2.2cm, with TRIX-pattern holes.
- 5 black 6h long **Narrow Strips**, 8*.9cm, and 1 black 1*4*1h **DAS**, 'B', 5.5*.9cm, with one lug broken off.
- 4 black, pentagonal **Bucket Sideplates**.
- Black **Triangular Plates**. • 2x **7.5*2cm**, 'C', (for the end of the jib). • 2x **6*3cm**. • 2x **6*3.5cm**. • 2x **Flanged** (with 3 holes in the flange).
- 4 **Wheels**, 38mm o.d. (rubber Tyres on 32mm Ø 'Pulleys'.)
- **Axes**: 1x 16cm; 1x 9cm; 4x 7cm; 1x 3.5cm.
- 1 **Crank Handle**, 13cm shank and 15.5cm long o/a.
- 1x 3.5cm **Screwed Rod**.
- 2 wooden **Pulleys**, 8.5mm o.d., and 3x similar **Knobs**, use unknown.
- 1 aluminium **Collar**.
- 11 **Spring Clips**.
- 4mm Ø **N&B**. 52 steel RH **Bolts** from 5 to 16mm u/h. 9 steel & 42 brass hexagonal **Nuts**.
- 1 black **Span'driver**, 8.5cm long.
- 1 wooden **Winding Drum** not shown in the photos but it can be seen in the models on the next page. It is a cylinder 40mm long & 23mm Ø which is a push fit on the Crank Handle, and has a small



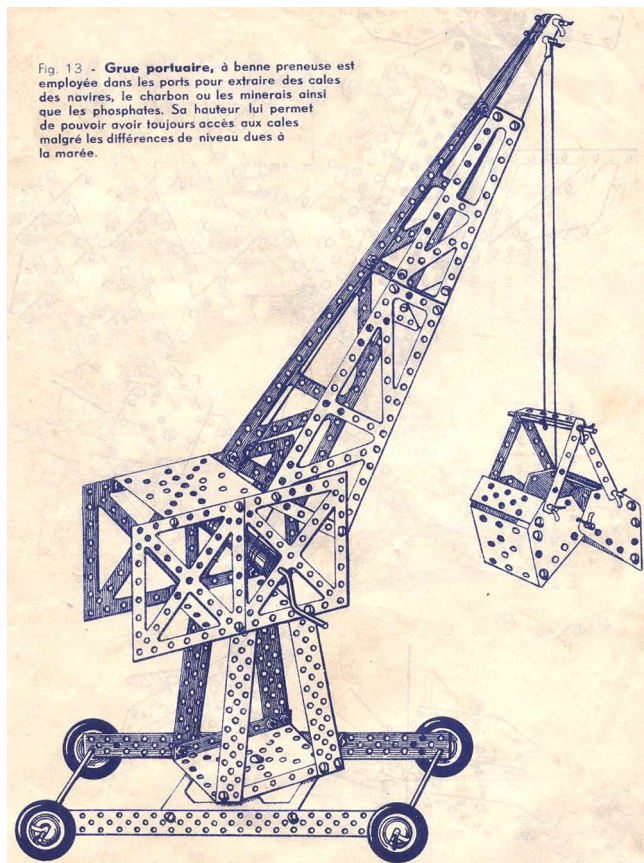


Fig. 13 - Grue portuaire, à benne peneuse est employée dans les ports pour extraire des cales des navires, le charbon ou les minerais ainsi que les phosphates. Sa hauteur lui permet de pouvoir avoir toujours accès aux cales malgré les différences de niveau dues à la marée.

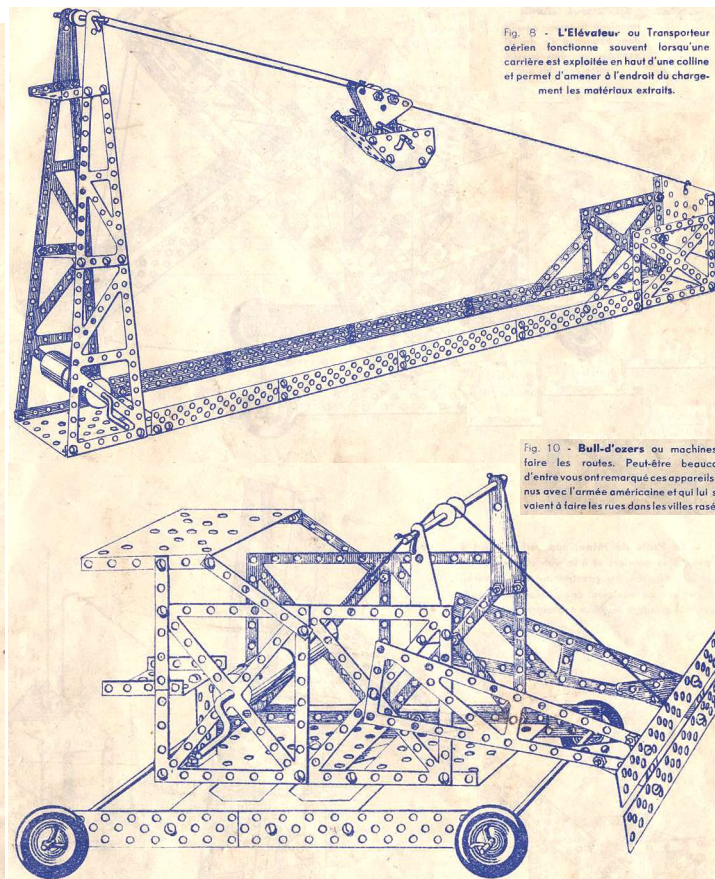


Fig. 8 - L'Élévateur ou Transporteur aérien fonctionne souvent lorsqu'une carrière est exploitée en haut d'une colline et permet d'amener à l'endroit du chargement les matériaux extraits.

Fig. 10 - Bull-dozers ou machines à faire les routes. Peut-être beaucoup d'entre vous ont remarqué ces appareils venus avec l'armée américaine et qui lui servaient à faire les rues dans les villes rasées.

hole through it for the Cord to be tied on.

The Manual It is 218*154mm deep and has 16 pages including the covers. The front is generally similar to the lid but with a yellow/fawn background. Also the 'better world' words are omitted, and the JUGA logo is at the top with Le Monteur (The Builder) above it, and 'Les Compagnons ...' underneath. There is no description of the parts inside, nor the set contents, and there are no building instructions or lists of the parts required for the models. It can be seen though from the 3 models shown above (25-35% of the original area, and the position of the text changed) that building them should be fairly straightforward. Apart from one 16cm Axle the main parts found in the Set would be sufficient to make any of the manual models but 2 extra Inner Jib Frames would be needed

for the tower of the model featured on the box lid & manual cover. Two of the actual parts differ from the way they are shown in the manual: the Outer Jib Frame does not have the 2 triangular cutouts at its narrow end, and the top of the 5*5cm Flanged Plate has 18 instead of 10 holes.

Postscript from Jeannot Buteux/Constructorama via Jacques. JUGA was made at the end of 1947 by Jules Gauvry of Saint-Romain le Puy, a small town near Saint-Etienne, and the name of the system comes from the first letters of its creator's name. Jacques added that he was living in Saint-Etienne at that time and though very interested in metal construction systems, doesn't remember ever seeing a JUGA set in a toy shop.

JUGA: S2

OSN 36/1094

Snippet: German MERKUR A box label from this system was shown in 27/794 and since then 3 sets have been seen on Ebay. All are in red boxes with the blue OSN 27 label, and all have the same pattern of partitioning. One of the boxes is shown right with its manual. As can be seen the Strips, Brackets, etc are black, the Flanged Plates yellow, and the circular parts red. The second set has the same colour scheme though the red parts look to be a distinctly lighter shade. They are also lighter in the third set and the Flanged Plates are blue. The Strips etc in this set look silver but that may well be a trick of the light.

Among the parts that can be seen in the three sets are 5,7,11,25h Strips; 3h Strip but with no centre hole; 2h Strip with concave sides that looks like a cycle chain part; Curved Slotted Strip about 4h long; 25h A/G; 1*7*1h DAS with the outer holes on the top slotted; 5*11h



Flanged Plate with again the outer top holes slotted; A/B; Double Bent Strip; D/B; 2h deep D/B. The red parts have tapped bosses and the Axles look silver.

MERKUR [2]: S1

OSN 36/1094

A JUGA No.1 Outfit This is about an unused JUGA No.1, a smaller set than the one described in 36/1093. The latter had nothing to indicate a size, so for convenience I'll call it Set X. The present box is the same size & design as Set X, and again isn't numbered, but the manual, although the same size and with a cover of identical basic design, has a large '1' in its top right corner. This Set has only one layer of parts, with fewer types but some of them were not in Set X.



Above the right side of the open box. The parts are arranged symmetrically right/left except that a black 1*4*1h DAS replaces the green Span'driver on the left side. The parts, including the box for small pieces, are clipped to the brown backing card by the same steel clips that were used in Set X. The parts in the box are shown at the bottom of the column.

The Parts A list of the parts in the Set follows using the names as in OSN 36. **New parts are in red.** Some details are given but the OSN 36 information is not usually repeated.

- 2 each **Outer Jib Frames, Inner & Outer.** One of each bolted together make the Set X Outer Jib Frame. The Inner section is pierced unlike the root of the Set X Outer Frame.
- 2 red **Square Frames.** They are not square but 7*8h.
- **Flanged Plates.** • 1 green **10.5*7.5cm** with 8h flanges. It was under the white box in Set X. Not all the holes noted for the part in OSN 36 are actually pierced though they are all shown in some of the models in the Manual. • 1 red **5*5cm** with 4h flanges. • 1 green **7.5* 2.2cm** with 2h flanges. • 2 black **4.7*2.2cm** with 2h flanges.
- 4 green 11h long **Strips**, 15*2.2cm, with TRIX-style holes.
- 4 black 6h long **Narrow Strips**, and 1 black 1*4*1h **DAS** with bends of much larger radius than those in other parts.
- **Triangular Plates.** • 2 green **7.5*2cm** (for the end of the jib). • 2 black **6*3.5cm**. • 2 red **Flanged** (but with 2 not 3 holes in the flange).
- 2 green 2h long **A/Gs**, 11*13mm in section.
- 4 eyeleted, 9½mm wide **Wheels** (rubber Tyres on 30mm Ø nickeled 'Pulleys' but I doubt if the Tyres could be removed).
- **Axles:** 2x 11cm; 2x 7cm; 2x 3.5cm. One of the 3.5cm is 4mm Ø; all the rest are 3.8mm.
- 1 **Crank Handle**, 9½cm shank, 12cm long o/a, 3.8mm Ø.
- 2 wooden **Pulleys**, 9½mm o.d.
- 10 **Axle Stops**, rubber, 7-7.5mm o.d.
- 4mm Ø, .75mm pitch **N&B** (the old French standard). 26 steel 7.0mm Ø RH **Bolts**, 8mm u/h. 26

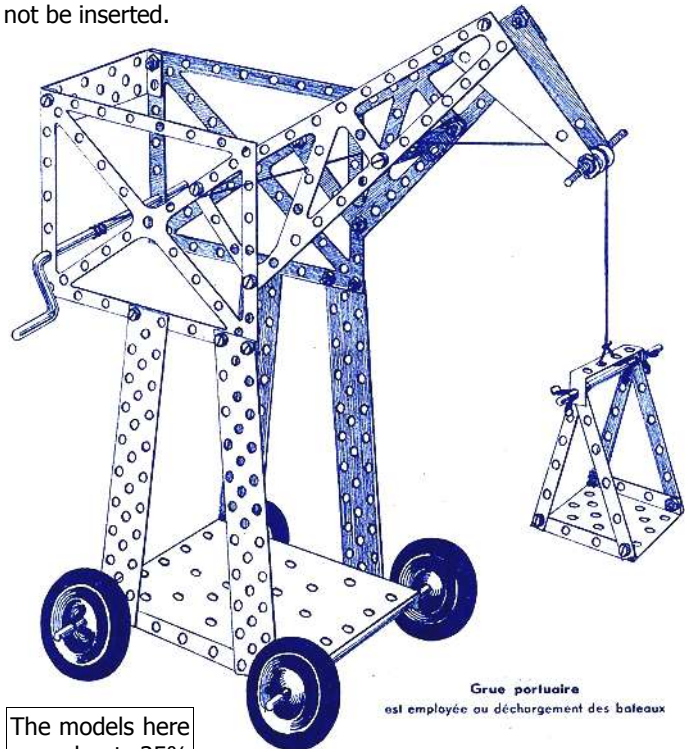


brass hexagonal machined **Nuts**, 7.0mm A/F & 2.5mm thick.

- 1 black flat **Hook**, 34mm long o/s and .7mm thick.
- 1 green **Span'driver**, 8.5cm long. It has a hexagonal opening on one side, almost big enough to fit the Nuts, and a rounded bottom opening on the other 6.1mm wide.
- The **black parts** are chemically treated.

The Manual has 16 unnumbered, cream pages including covers. p2 (=C2) has just a short note that accessory sets would soon be on sale. p16 has just the Juga logo & CRÉATION MULCEY St. ETIENNE in tiny letters (also on the lid label). The other 13 pages are devoted to 15 models from Manège (a High-flyers Roundabout) to Camion de dépannage (Breakdown Lorry). Each has, as in the Set X manual, a large dark blue line drawing and a few lines about the full-size machine.

There is a good range of models including 3 simpler Cranes (cf the one below & the OSN 36 version), a Drop Hammer, a 2-armed Semaphore Signalling Unit, a Letter Balance, a Ballista (though it seems to lack a spring element), a Ship, & the Breakdown Lorry below (with unusual steering — it is the only vehicle model apart from a horse-drawn Cart). Inevitably with the limited number & range of parts, many of them specialised, some of the models are more successful than others, but most are a brave try. There are minor differences in the parts shown in the models & those in the Set, notably Spring Clips instead of Axle Stops, a Wire Hook in some models, and a Screwed Rod, not found in the Set, in others. Also in some cases the 2-part Jib Frame is shown as a single piece. In making the Crane below I found that the holes for the Bolts which held the inner end of the jib did not quite line up and the second Bolt could not be inserted.



The models here are about 35% of their original area.

