clude the letters F and R.]

GORDON EZ mentions constructional and electrical sets made in the DDR by Gordon-Apparatebau KG, Schmalkalden/Thüringen between about 1960 to 1972, but without any further details.

HELLER From what I can gather from EZ there was never a MECHANIKUS set in Germany (see 12/321). The tool was called 'Mechanikus' and was included in **HELLER'S STAHLBAU** outfits there. These sets were sold in France under the name **HELLER-MECANICUS** (HELLER-MECHANICUS in 12/321 was an error), and contained the same tool called 'Mécanicus'.

The tool described in OSN, and included in the **MECO** set, was called the 'Constructor' and with its interchangeable heads was more versatile than the 'Mechanikus'.

The period for STAHLBAU is from 1933 to at least 1938 but the French version seems to have been available after WW2 (13/360). MECO dates from about the same time, perhaps from 1934.

HOHA Jeannot listed 2 versions, the first with a hole pitch/diameter of 13.2/4.1, and the second, 13.0/4.6. Both had nickel plated parts and the first at least, rubber Tyres and Pulleys. MCS gives 13.1/4.4, and mentions brightly polished plating with some red and possibly, blue parts. It also mentions the early '30s whereas in EZ a small box is shown among early post-WW2 outfits.

Frank Beadle has some HOHA parts and among them is the 11*5 Flanged Plate (flanged on the long sides) with no holes in the centre 7*3 area, that can be seen in the MCS models. But Frank also has another which, from a photo, seems to be the last 5*5 holes of the 11h long one.

HW Metallbaukasten A photo of a box lid in EZ has METALLBAUKASTEN diagonally across it and the triangular HW logo of Hans Wünsch, the East German toymaker from Niederwiesa/Sachsen. The firm started in 1949 and this was probably one of the early products. The simple Windmill on the lid includes Strips up to about 11h long, a 9h long Flanged Plate, flanged on the long sides, and a 4h Bush Wheel or Wheel Disc.

IMPERATOR See 10/260. EZ gives the Axle diameter as 3.5mm and by scaling, the Strips seem to be about 5mm wide, and the octagonal Hub ¾" A/F.

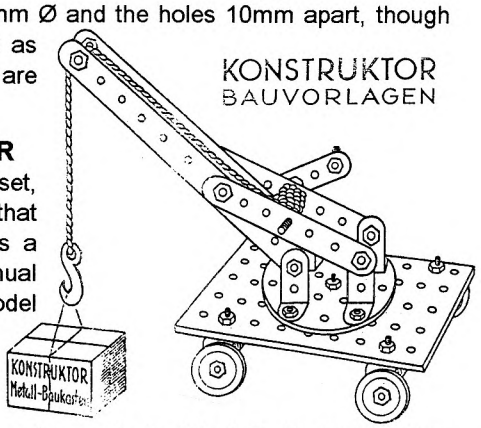
INDUSTRIE EZ shows an open box with the parts in it, similar to the set shown in MCS. The Strips though don't look as narrow as they appear in MCS and based on the 5mm hole, their width scales at ½". The 8-spoked Pulley Wheels are about 30mm diameter. All the parts have a black metallic finish. Two periods are quoted - 1919 to at least 1931, and 1925 to at least 1935.

INGENIEUR This name is listed in EZ but without any details except that it was made by Ihag GmbH of Nürnberg around 1919.

JOLEI This little system from c1950 had only some 12 different parts, all in plain aluminium except for the steel N&B. The holes were 4.4mm Ø, spaced at 11.0mm. EZ has a photo of a backing card with some parts on it - I think I can see 3,4,5,7,9&11h Strips, 1*3*1 & 1*5*1 DAS, an Angle Bracket, and a Screwdriver rather like the MECCANO #36.

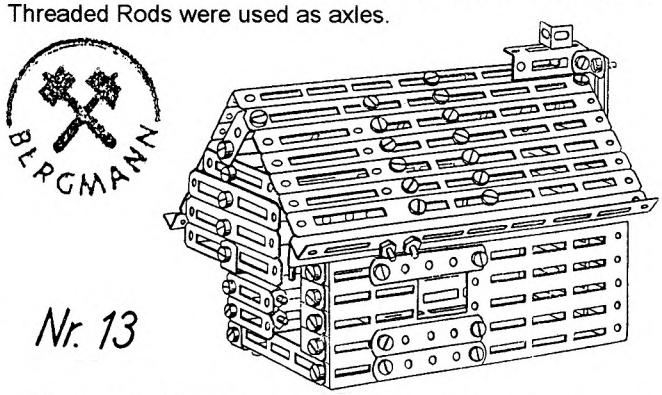
KEIM EZ gives only the maker, Keim & Co., A.G., für Blechindustrie, Nürnberg, and the period, c1923 to c1928. A graphic from 1923 shows panels falling off a skyscraper in a strong wind (or so it seems). Perhaps it was an architectural system.

KINEMA EZ confirms much of what appeared in 12/306. The Tubes are 6mm Ø and the holes 10mm apart, though their size is given as 2mm. The dates are c1946 to 1950.



KONSTRUKTOR An East German set, but apart from that all I have on it is a copy of the manual cover with the model opposite on it.

KONSTRUX A small system of some 30 parts, made in West Berlin by the firm E.P.Damaschke, from about 1946 to 1950. The parts though, painted black, are unusual and, as can be seen in the model below, most have long slots in them with square ends. The holes are 4.1mm Ø and are spaced at multiples of 12mm. Other parts can be seen in a nice, good sized multi-jib Crane shown in EZ, and include DAS, Flanged Plates, small Pulleys, and Discs of several sizes up to about 60mm Ø. The larger Discs have a centre holes, 4 long radial slots, and radial holes between them. These slots are the only ones to have rounded ends. The corners of most parts are slightly chamfered as in the House, but a few on Plates and A/Gs are square - none have the large radius of the 5h Strip in the House. An ordinary Double Bracket is shown in EZ with a similar one alongside except that it has large hexagonal holes in its sides. Its purpose isn't clear but there is a hexagonal section Threaded Coupling that might be about the same size. It looks as if Threaded Rods were used as axles.



The words Konstrux Deuteron appear on the manual cover under the main KONSTRUX name, but what this signifies I don't know. Also in addition to a logo based on the initials EPD of the manufacturer, there's another (above left) with the name Bergmann, and what might be crossed hammers.

MABA EZ has a photo of the #4 Set described in 12/306. The dates given are c1946 to 1950.

MAFELL From EZ. This system was made by Maschinenfabrik Fellbach GmbH, Stuttgart-Fellbach/Württ., around 1930. It consisted of relatively few, large steel parts, including strong wheels with suitable axles. In many ways it was comparable to the GILBERT WHEEL TOY.

MECANIC/MEKANIK In answer to the point about which came first (13/361), EZ provides the answer. The original name (in 1948) was MECANIC and the original maker, Dörken & Mankel KG, Ennepetal-Voerde/Westfalen. Later (c1959 to c1963) the system was made by Adrian & Rode, Velbert/Rheinland and by that time the name had changed to MEKANIK. Jeannot wrote that the change was made in

KINEMA This account, based on 2 sets to hand and the Ebay photos of 20 others, seeks to amplify the short note in 12/306 on this unusual German system. Its main parts are Tubes joined by Unions, held together by Split Pins. PINIT (25/744) is the only other system to use Spilt Pins, and then in a different way.

Sets with three different lid labels have been seen and an example of each is shown in Figs.1 (with a manual on top of it), 2 & 3. Their chronological order is not entirely clear but though there are a few anomalies it seems that Type (A) came first. Dates & the set structure are also unclear. ***MCS*** speaks of Sets 0, 1, 2, plus a supplementary outfit, in the period c1946-1950; ***Baukästen*** of Sets 00 & 0 from around 1946 to 1950, but also shows a photo of a Set 1.

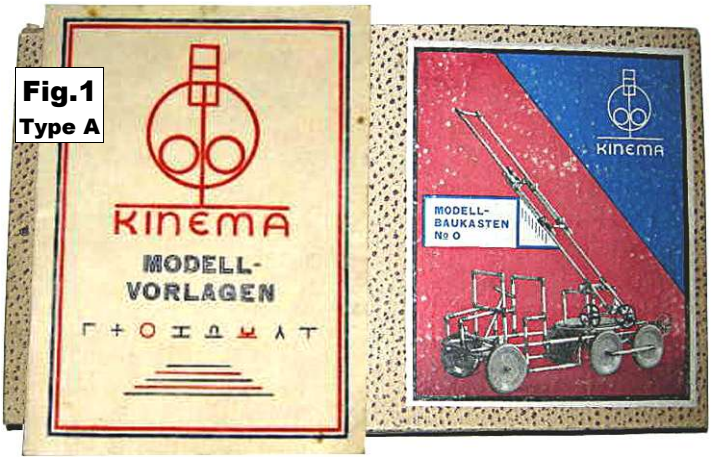


Fig.1
Type A

Fig.2
Type B

The PARTS

Fig.4 shows them as in the (B) Illustrated Parts (except #140-148 are reduced by 50%). Some actual parts can be seen in Figs.5-8, 10 & 11. Holes to take Tubes are 6.6mm Ø; the attachment holes are 1.5mm. Most parts to hand are steel but aluminium Tubes & Unions are known and may be quite common in all periods. Below, my names for the parts, with the items not seen asterisked, & notes where appropriate.

#1-11,12*,13 Tubes, rolled, 15-300mm long, 5.9mm Ø & 4.9mm i.d., with 4 rows of 1.5mm holes at 10.0mm pitch, but one opposite pair is staggered by 5mm relative to the other. **#16 Tube Coupler**, a rod 25mm long, a very tight push fit in the Tubes. **#17 Split Pin**, about 1.2mm nominal dia-meter and 15mm plus head long. Some to hand are much harder steel than others, and some have equal length legs. In both cases this makes using the part much more difficult, but one can't be sure that these Pins were original. **#18* Threaded Pin**. **#20* Nut**. **#22* Collar**. **#24 Pulley**, 55¾mm Ø, 8¼mm wide, with a 6.1mm bore, & a 4½mm long tubular boss, drilled for a Pin. **#26 Tyre** 72mm o.d & 9¼mm wide when fitted to #24. KINEMA BALLON is moulded into both sidewalls. **#28* Rubber Ring** to fit Pulley #34. **#30 Hand Wheel** 38½mm Ø with boss as #24. **#32 Headlamp** 22mm Ø & 13mm deep – its back is flat rather than pointed and it was shown thus in the (A) manual. **#34* Flanged Disc Pulley**, which scales at 90mm Ø.

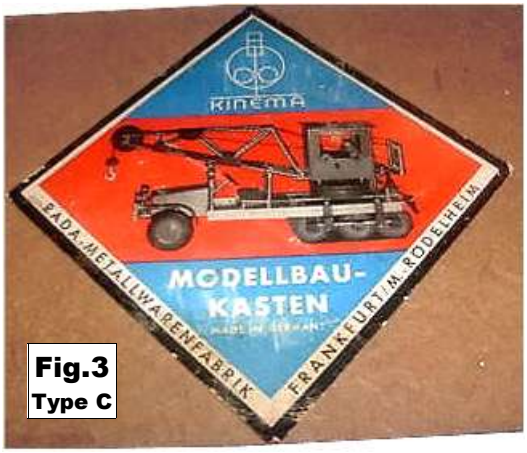


Fig.3
Type C

Unions etc (those seen are shown below): **#36, 90°**. **#38*, Angled 'T'**. **#40, 'T'**. **#42, Bearing Bracket**. **#44*, Pivoted Bearing Bkt**. **#46, Pivoted Unions**, the parts are held together with a rivet. **#48, End Bearing**. **#50, End Union**. **#52, 4-Way**. **#54*, Link**. **#56*, 58*, 180°-, 90°-Attachment Brackets**. **#60*, Hub**, with 2 face holes. **#62*, 64*, Small, Large Gear/ Sprocket**. **#66*, Chain**. **#68, 70* Small, Large Crank**. #68 has an


Fig.5

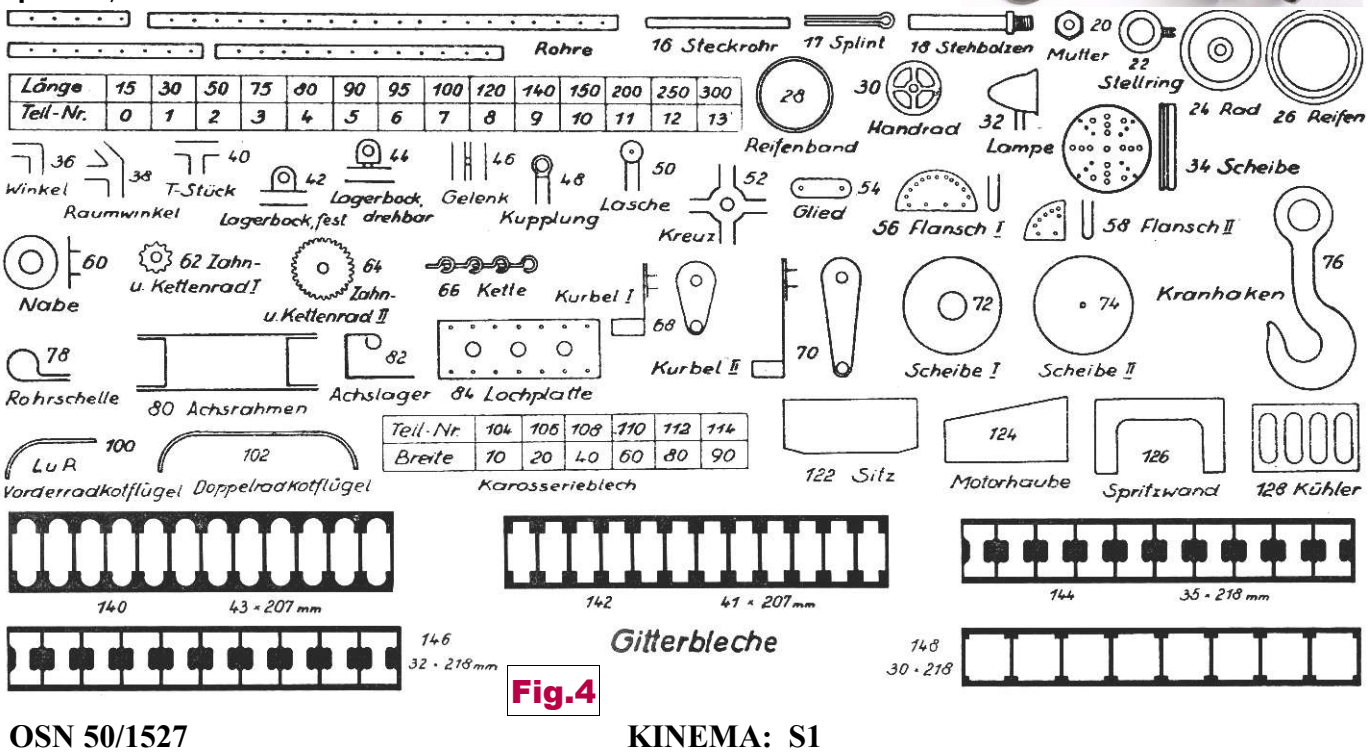


Fig.4

offset of about 20mm; my example at least has no holes in its 'handle' for a Pin which reduces its usefulness. **#72*, 74* Discs**, probably 20mm o.d. **#73* Hook**, it looks flat & about 40mm long. **#78* Tube Clamp**. **#80 Front Axle Beam**. The top & bottom plates, 122mm long & 15mm wide, have attachment holes plus end & centre holes for Tubes. **#82 Steering Arm**, handed, see Fig.11. It fits between the end of the Axle Beam with the king pin (a Tube) passing through its upper & lower arms, and the Beam's end holes. The track rod is pinned to the end of the longer arm; the stub axle pushes into the rolled end of the shorter arm. **#84* Pierced Plate**. **#100 Front Mudguard**, handed, 20mm wide with the outer edge curled over. It's only two attachment holes are at the front, along the inner edge. **#102* Rear Mudguard** for 2 wheels, handed. **#104*, 106, 108-114* Rect. Plates**, 105mm long, 10-90mm wide, with the shorter edges curled over and holes along the sides. **#122* Seat**. **#124 Bonnet**. It is in 4 parts, 90mm long: 2 tapering Side Panels as shown (but with holes along their bottom edges) and 2 Top Panels, each 25mm wide. All are hinged together by 3 lengths of 1.1mm springy Wire passing through their crenellated rolled edges. The centre Wire is slightly longer than the others because it engages with holes in the Bulkhead & Radiator Grille. **#126 Bulkhead**, 105mm wide & 60mm deep with curled outer edges and perforated along all its outer edges. **#128 Radiator Grille**, 66mm wide with 5 openings, not 4, flanged along its lower edge, and perforated along the top and along the flange. **#140-8* Railings** with holes along the longer edges.

Fig.7

The colours of the parts are as in the various photos here but the Bonnet Sides may be red or blue, and the Railings & Radiator Grille are usually blue but sometimes black.

The SETS

TYPE (A) 3 of the 6 Type (A) sets have plain lids, 2 purple, one red; 3 are patterned as in Fig.1, but the other 2 are reddish in colour. All are No.0, as shown on their labels, & all have the label at the righthand end. All look the same size, one is marked 30*17cm, and all have the partitioning in Fig.6. All contain Tubes, 4 Pulleys with Tyres, a Hand Wheel, and Unions. In most sets some of the Unions are black, while in one about half are black & half red.

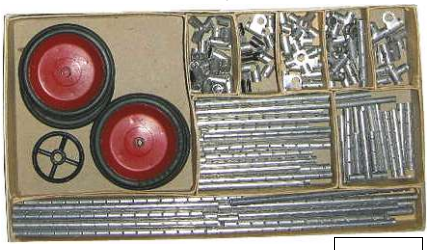


Fig.6

3 sets had a manual with 32 pages 20* 14½cm, & the cover in Fig.1. Its introduction mentions Set 0 with the promise of add-on Auto & Eisenbahn sets, plus animals & dolls to the same scale. The Illustrated Parts are on a page '4701 Bl.1' and go to #58. A Patent application is mentioned.

In passing, the Manual gives the maker (as before) as RADA-metallwarenfabrik, Frankfurt/M.-Rödelheim, but also the KINEMA-Konstruktionsbüro (design office) as Maurer und Ehrenberg, Langen/Hessen, and the sales office as KINEMA-Verkauf, Frankfurt/M.-Nied, though this last was crossed out in one of the Manuals.

TYPE (B) My sets are Nos.00 & 0 and they were one lot with the parts mixed up, and no indication on the boxes of the set size. It was possible to sort them out because the contents of the 00 were given in the literature with the sets. All the parts are steel except that some of the 90° Unions are aluminium. Of the steel some are a uniform dull dark grey, and some a lighter grey with patches lighter still, and almost shiny. Probably all the parts were originally shiny. The quantities of dark to lighter steel parts, and steel to aluminium Unions, didn't relate to the contents of the sets.

Set 00 is in a similar box to the (A) No.0 (mine measures 31*17*2¾cm overall) with the same partitioning. Its lid is dark red with the Fig.2 label except it has no text in the white edges. It covers the righthand two-thirds of the lid. The contents are: 1,9,7,4,5,1,1,3,2x #0,1,2,4,5,8,9,10,13; 1x #16; 50x #17; 4x #24; 1x #30; 2x #32; 16x #36; 4x #40; 3x #42; 8x #46; 1x #48; 5x #50; 1x #68; 1x #80; 2x 82; 2x #100; 3x #106; 1x #110; 1x #124; 1x #126; 1x #128. These parts are sufficient to build a 4-wheel Lorry with steering, similar to Fig.10 model.

The literature with the set consisted of 6 sheets 143* 206mm printed on one side only, and a double-sided sheet twice the size folded in two. The first sheet is an introduction (which says that it wasn't possible to include Tyres in the set but they are in Set 0, and that larger models can be built with the two sets); then 2 sheets 4701 Bl.2 & 3, showing basic constructions; and 3 sheets 4702 Bl.1-3 with the Illustrated Parts up to #148. The folded sheet lists the set contents, and shows the model Nr. 01, Lastauto, with 2 halftones & a diagram of its front structure & steering, plus lists the pieces needed for each of 6 parts of the model.

Set 0 My set is in a box, 32*24¼*1¾cm, with a purple lid and the Fig.2 label covers all of it. The partitioning is shown left & the contents look very similar to those of the (A) No.0, though possibly with rather more Tubes & Unions. Of the 7 sets seen on Ebay, 3 have boxes which look blue rather than purple. One of them has a smaller label like the 00 one.

The model sheets are the same size as in the 00 and there are 32 of them, with Blatt 1-32 in the top right corner. They are housed in a folder with an 00 lid picture printed on the front & an introduction on a label stuck inside it. It claims 236 parts in the set and mentions larger models with add-on sets. The loose pages slide into the turned over edges of the (plain) back cover. Blatt 1-5 are the Illustrated Parts & Basic Constructions as for Set 00. Blatt 6-18 & 21-30 have 31 models from No.1 Fahrrad mit Anhänger (Bicycle with Trailer) to No.31 Schwebekarussel (Fig.14). Most of the models are one to a page with a blurry halftone for each, plus a list of parts, & a few words of building advice for a few models. 2 models are said to need 2 No.1 sets and 4 others need a few extra parts, though it is suggested that simpler versions might be made without them. The models include small domestic items, 3 small model railway accessories, handcarts various, 2 horse-drawn Carts, a Lorry with cord operated steering, a Tip Wagon (Fig.12), 2 Windmills, a Swivel Crane (Fig.9), a simple Gantry Crane, a Stamping Machine, a Trip Hammer (Fig.15), a Monoplane, & a Motorcycle. Cardboard is used to add realism to a few models and would certainly improve many of the others. Blatt 19 & 20 show the Swivel Crane alongside 2 of the other models, a Lorry and a Tricycle Delivery Motorcycle respectively (both fairly basic). Blatt 31 & 32 have photos of 4 models (Figs.16a-d) made using supplementary sets. They are also shown in the lid label (Fig.2).

So phase (B) seems to follow (A) because only Set 0 is known for (A); the corresponding Illustrated Parts (B) page is 4702 Bl.1 with parts up to #64; and no mention of a Patent. Against: the Headlamp's shape, always flat backed but drawn pointed in (B), and, but probably of less concern, one Ebay (A) set gives a date as 1952, and one (B) claims 1947.

Set 1 The 5 Ebay examples seen have 2 layers of parts (as in Fig.8 overleaf) in boxes, 42*31*5cm, with purple or blue lids and the Fig.2 label. The probable parts include 10 Pulleys with Tyres; 2 Flanged Disc Pulleys with Rubber Rings; all the Set 00 parts plus 2 Rear Mudguards, 2 Headlights, & a Seat; at least 3 Hand Wheels; 4 or 6 Hubs; at least 2 of each Crank; 1, perhaps 3 Hooks; some Railings: #142 in 2 sets, 144 in the others; at least 1 Plate #84; & Brackets #56 & 58. I couldn't see any

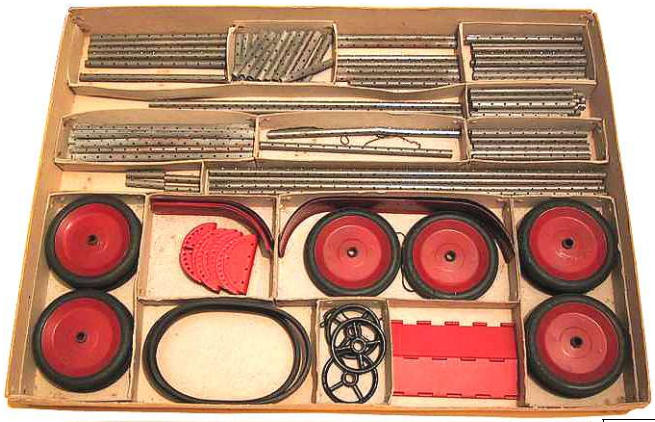


Fig.8

Sprockets or Chain.

The Model Leaflets with this set include those for No.00 & probably No.0, plus 4 No.1 models: 101 Feuerwehr+ auto; 102 Schlepper; 103 Kippwagen; 104 Kranwagen. Thumbnails of 102 & 103 are shown in Figs.13a,b; Nos.101 & 104 are simpler version of the Figs.16a & 16c models. These leaflets were folded once or twice to fit into the (B) folder, but in one set they are shown loose together with an (A) manual.

TYPE (C) Two sets have been seen on Ebay, both in wooden boxes with the Fig.3 label (it covers the full depth of the smaller box's lid). This set, 35*20cm, has a sliding lid (perhaps hardboard) with partitioning which matches the No.00. The parts too match except that there are the following extras: a Front Axle Beam, and 2 each Pulleys & Mudguards – parts from a similar set perhaps. The lot included the Leaflet for the 01 Lorry.

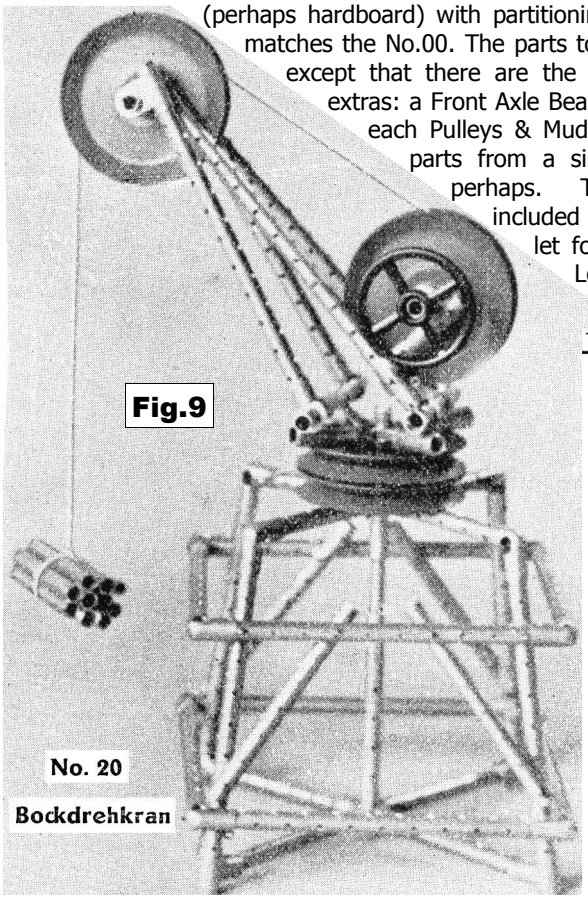


Fig.9

Teil Nr	Stückzahl
1	8
2	8
3	8
4	4
5	1
6	1
7	6
8	4
9	2
16	3
17	50
24	4
30	1
36	16
40	6
42	6
46	4
48	4
52	3

The 2nd set, 48*35cm, has 2 layers of parts and a hinged lid. The partitioning is almost identical to the (B) No.1, and the parts look to match as far as can be seen. The photos are blurry but the leaflets for 3 of the (B) Set 1 models No.10x can be seen plus some of the (B) folder size.

With no indication of these outfits' number, and given the 'mystery' of the No.2, I wonder if the (C) sets were the equivalent of the (B) 00-1 outfits but in wooden boxes & renumbered 0-2 (to make them look better value, or to justify a price rise).

USING the PARTS

I built the 00 Lorry below, but included the Tyres & a spare wheel from Set 0, and because I couldn't understand the instructions, changes were made to the rear axle supports, the Headlamp mounting & the front bumper. The steering is shown in Fig.11 and it worked well The model was reasonably easy to build but caused sore fingers even if pliers (sometimes essential) were used. A few paking washers, not part of th system, were needed here & there (but there was no need for a serrated washer). Using the No.0 parts to add a crane to the back of the model showed that such changes were not to be undertaken lightly because any modifications to 'Rod/Tube' systems are always tiresome, and in this case there was the difficulty of removing Pins from inaccessible corners, and then straightening them sufficiently to pass through the holes in, quite often, 2 Tubes. But the finished model was neat looking in its appearance and was more rigid and more robust than I'd anticipated.

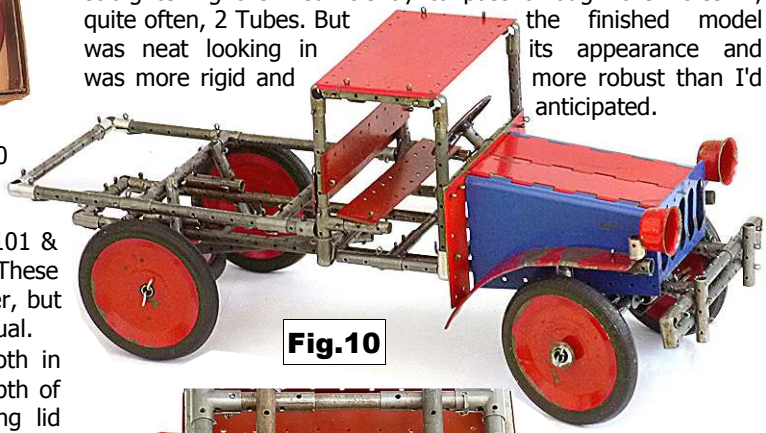


Fig.10

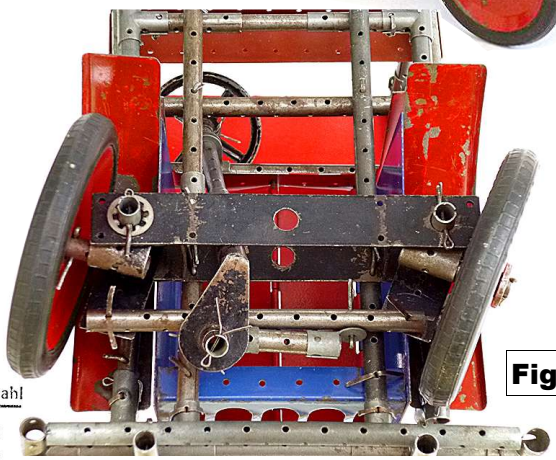


Fig.11

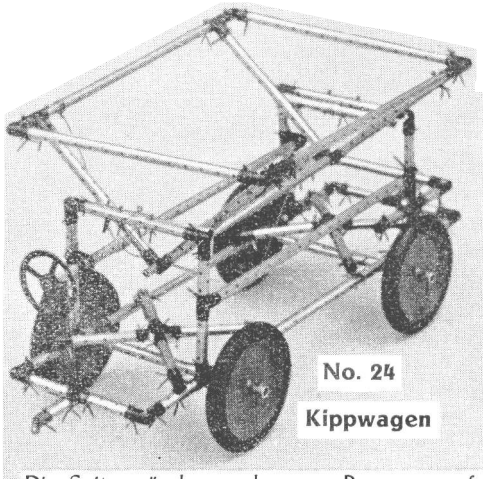


Fig.12

Nr.		Nr.	
1	6	16	3
2	9	17	50
3	6	24	4
4	4	30	1
5	1	36	16
7	4	40	12
9	2	42	6
10	4	46	6
11	2	48	6
12	1	50	6
13	2	52	4

Die Seitenwände werden aus Pappe angefertigt. Der Wagen kann auch ohne Gummireifen auf Schienen laufen.

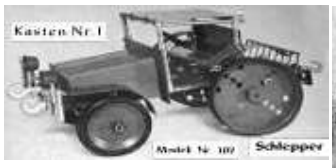
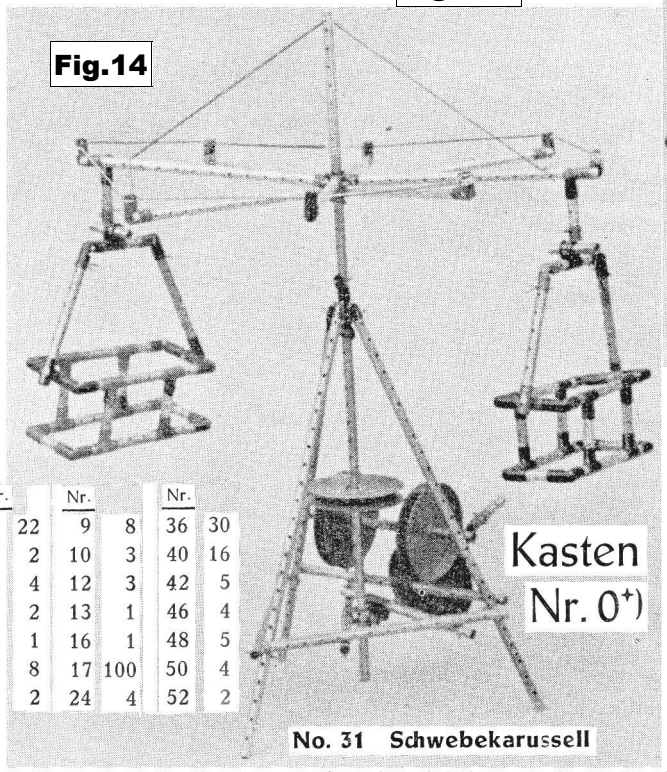


Fig.13a

Set 1 Models

Fig.13b

Fig.14



Nr.		Nr.		Nr.	
1	22	9	8	36	30
2	2	10	3	40	16
3	4	12	3	42	5
4	2	13	1	46	4
6	1	16	1	48	5
7	8	17	100	50	4
8	2	24	4	52	2

Kasten Nr. 0*)

No. 31 Schwebekarussell

*) Die Gondeln werden nur mit den oberen Rahmen gebaut. Die Sitze werden aus Pappe geschnitten und an dem Rahmen mit Splinten befestigt. Die Winkel am „Stern" fallen weg. Für das Modell genau nach Abbildung werden zwei Kästen No. 0 benötigt.

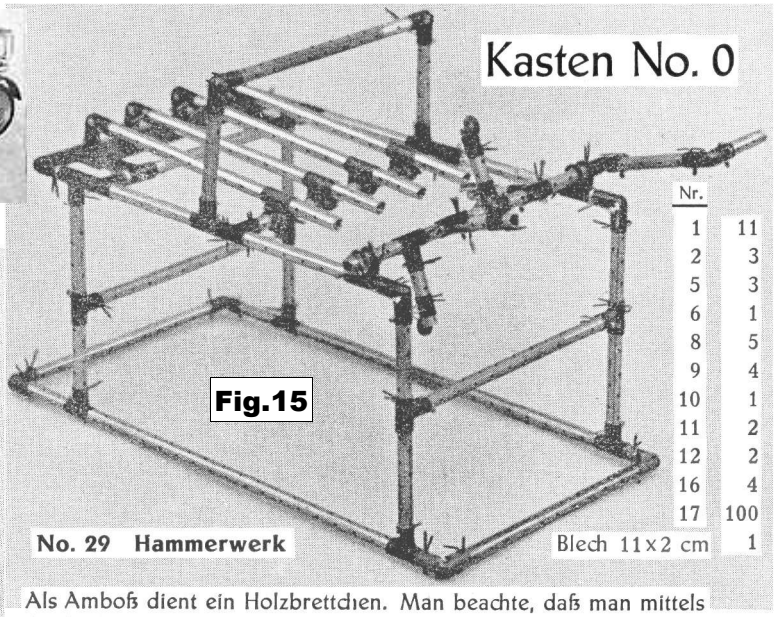


Fig.15

Nr.	
1	11
2	3
5	3
6	1
8	5
9	4
10	1
11	2
12	2
16	4
17	100

No. 29 Hammerwerk

Blech 11×2 cm 1

Als Amboß dient ein Holzbrettchen. Man beachte, daß man mittels Steckrohren fehlende Rohrlängen herstellen kann.

Figs.9, 12, & 14-16d match their originals in size & the detail visible.

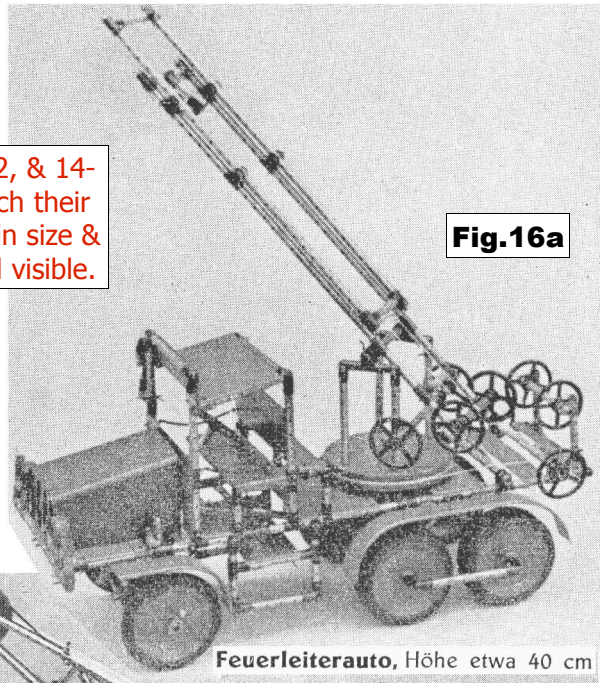
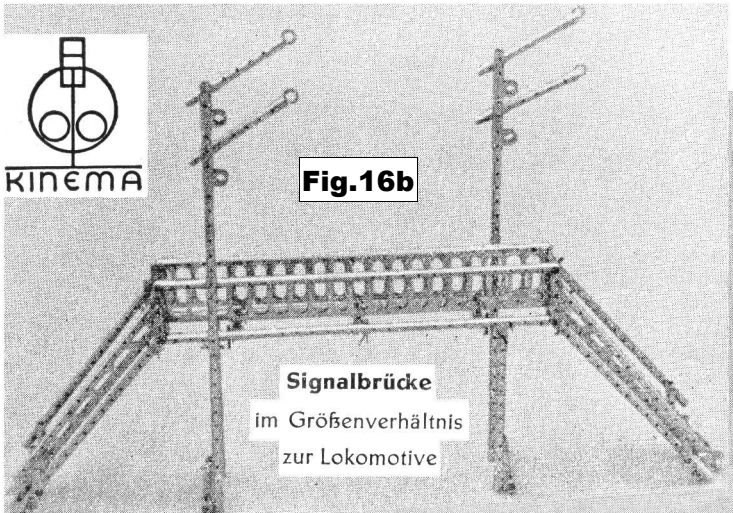


Fig.16a

Feuerleiterauto, Höhe etwa 40 cm

KINEMA

Fig.16b



Signalbrücke im Größenverhältnis zur Lokomotive

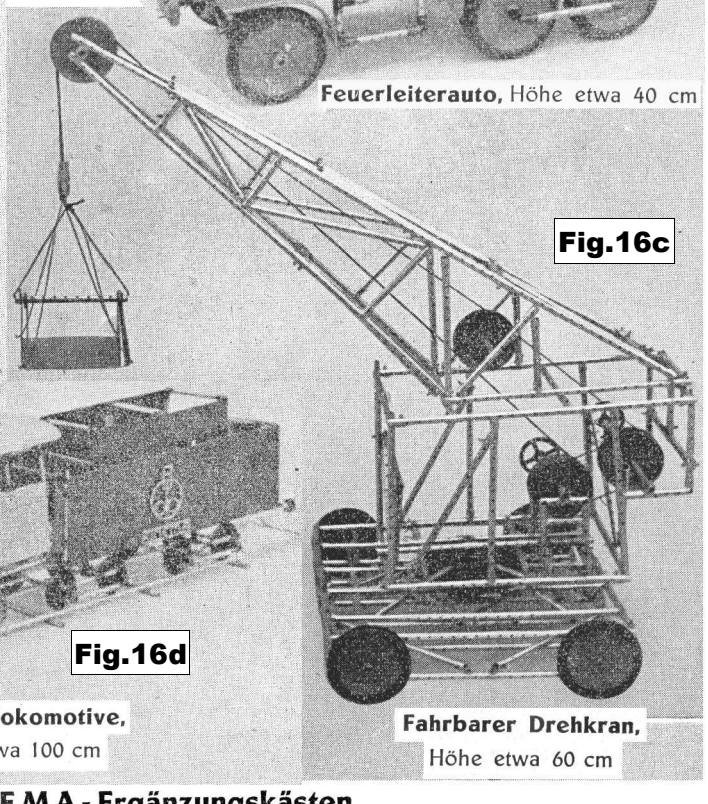


Fig.16c

Fahrbarer Drehkran, Höhe etwa 60 cm

Fig.16d

Schnellzuglokomotive, Länge etwa 100 cm

Modelle aus KINEMA-Ergänzungskästen