



Fig.1

MÄRKLIN MINEX This account is based on a draft kindly supplied by Kendrick Bisset, some notes from Thomas Morzinck, a Nr.02 set & a few Gears to hand, & some Ebay photos. With a hole pitch of 1/4" MINEX was a half-size version of standard MÄRKLIN Metall-Baukasten (itself an outgrowth of MECCANO). It had a number of parts not in the standard system, notably Flexible Plates, and many of the parts were made of aluminium alloy (at the time the use of aluminium rather than steel was encouraged by the government). Another innovation, for the first time Rubber Tyres were included in Märklin sets.

The system was introduced in the Spring of 1939 at the Leipzig fair and the earliest PR known is 0639. It was heavily promoted with a lot of different ready-assembled models made available for dealers to exhibit. Emphasis was given to the possibility of models to suit the H0 model railways which had been introduced in the mid-1930s. The volume of MINEX models would be one-eighth that of 1/2" pitch systems.

Production ended at sometime during WW2 and MINEX was not reintroduced afterwards. That did not stop others from launching small-scale systems soon after WW2: the German MIGNON & GLORIA, both with a hole pitch of 6mm, the 7mm East German OLYMPIA, the Austrian METEOR & the Belgian MINIATOR, both at 8mm.

The PARTS Although the pitch was reduced by half, also the width of strip parts, other key dimensions had lesser reductions. **Holes** were 2.9mm, **Axles** 2.8mm, & the **thread** had an o.d. of 2.7mm (the N&B fit 6BA well but the thread could have been a non-standard metric type).

Materials & finishes. Fig.4 shows the parts as in the manual's Illustrated Parts; Fig.2 some parts from a Nr.02 set with a few MÄRKLIN 1/2" parts for comparison. Brackets (the black parts in Fig.4) are steel, as are the flanged parts, the Railing #081/25, & the Perforated Plate #0170 (they are all painted red). Pulleys, the Flanged Wheel #020, & the Bush Wheel are red Bakelite with a brass bush moulded into those with bosses. Nearly all the other parts are aluminium alloy (exceptions are mentioned later) with most bare but the Plates #0150-0154 yellow.

Now some notes on the parts, and points of interest about those to hand & seen in photos. **Slots** are 4mm long. **Bosses** are single-tapped. **Strip parts & A/Gs** are .7mm thick. The **Drift** #018 is 3mm Ø and just to big to enter the holes. **Pulleys** #021a, 022, & 023 are 19, 11 & 8mm Ø. The **Bush Wheel** #024 is 19mm Ø; the **Wheel Disc** #024a 18mm, & 1mm thick. **Gears.** The 13t Pinion #025 & 26t Gear #027 mesh at 1/2" centres and are 9.8 & 18.2mm o.d., with 3 & 1 1/2mm face width. Their Module is .65 (39 DP) the same as standard MÄRKLIN. The only integer ratio from the 5 Gears is 2:1. The Worm is brass. The **Screwdriver** is 123mm long o/a and has a wooden handle. Again its shank is just too big to pass through holes and in any case its end is splayed. **N&B:** Nuts #037b are 5.0mm A/F; the Bolts' neat tapered cheesehead is 4mm Ø. #037a & 037ka are 5 1/2 & 3 1/2mm u/h. All are steel, brassed except that 037ka is blackened – it is often used in bosses. The **Aero Motor** scales at 1 1/8" Ø in a photo and has black cylinders inside a silver casing. The **Hand Crank** #062 & the **Collar** #059 are zinc castings, blackened & brassed respectively. The Collar is 7.0mm Ø & 6mm long. The **Tin Lid & Base** of the small parts tins, #065 & 065a, are 8 1/4mm wide, 41 1/2 & 40mm o.d., and are red painted steel or aluminium, .35mm thick. They also serve as Wheels, and the Base has an impressed pulley groove, see Fig.2, so it can be used as a

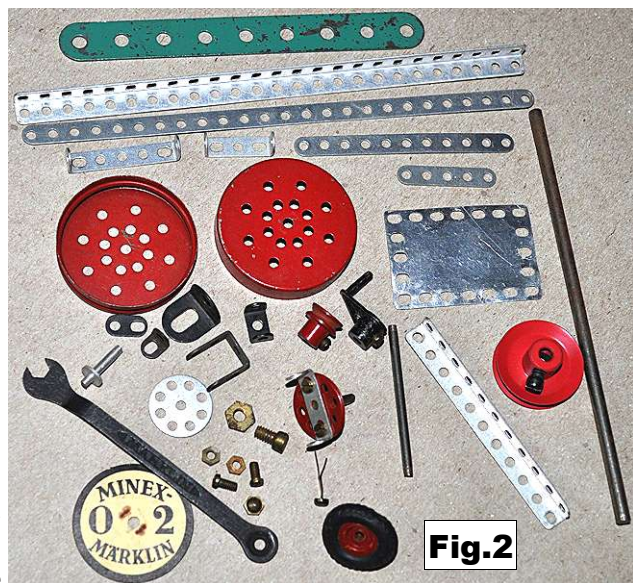


Fig.2

large Pulley. The pair can also form a slewing crane bearing, as in some of the models. The **Tyres**

PN	Name	Set	1	2	3	M	PN	Name	Set	1	2	3	M*
1/25	Strip		4	4	8		41	Propeller				1	
1/17	–				2		42	Aero Engine				1	
1/11	–		4	8	10		43	Engine Brkt				1	
1/9	–				4		44	2h high D/B	1	1		1	
1/7	–				4		44a	– shorter				1	
1/5	–		6	10	12		44b	– 2h wide				1	
1/4	–		2	4	6		45	Dble Bent Str				1	
1/3	–		2	4	6		45/3	– 5h span				1	
2/5	Slotted Str				2		46	DAS 2*5*h				1	
3/5	Curved Str		4	4			46a	– 1*2*1h				1	
8/25	A/G		4	8			47	Rev A/B		2		2	
8/17	–				2		47a	– 2h centre				2	
8/11	–		4	6	8		51a	Trunnion				2	
8/7	–				2		52	Figd Pl 5*11h	1	1		2	
8/5	–			4	4		53	– 5*7h				2	
9/25	U-Girder				2		53a	– 5*3h				2	
9/11	–				2		55	Spring Cord		1	1	1	
10	Flat Brkt		2	4	10		57	Hook		1	1	1	
11	D/B		2	4	6		59	Collar		4	6	12	2
12	A/B		8	8	20		60/7	DAS 1*5*1h		2	4	6	
13/15	Axle				1		60/5	– 1*3*1h		2	4	6	2
13/10	–				2		61	Cam				1	
13/7	–		2		2		62	Hand Crank		1	2	2	
13/6	–				2		63	Coupling				1	
13/5,5	–				2		65	N&B Tin, Lid		1	2	3	1
13/4,5	–		2	2	2		65a	– Base		1	2	3	1
13/3,5	–				2		68	Lge Figd Ring				1	
13/2,5	–		2	2	2	4	70	Manual Nr.1		1			
13/1,5	–		1	1	2		71a	– Nr.1-3			1	1	
18	Drift				1		81/25	Railing				2	
20	Figd Whl				4		86	Paper Clip	76	132	245	19	
21	Pulley		4	4	1		87	Washer, lge		4	4	4	
21a	–				2	1	87a	– small		4	6	10	
22	–		4	4	4	1	91/21	Tyre, lge			4	4	
23	Loose Ply		1	2	2		91/22	– small		4	4	4	
24	Bush Whl		2	2	4		94	Connector				2	
24a	Whl Disc		2	4	4		150	Triang Pl				2	
25	Gear 13t				1	1	151	Semi-circ Pl				2	
26	– 10t				1	1	151a	Quadrant Pl				2	
27	– 26t				1	1	154	Tapered Pl				2	
27a	– 19t				2		160/11	Flex Pl 11*25h				1	
27b	– 45t				1	1	160/7	– 7&25h				1	
30	Sprocket 12t				1		160/5	– 5*25h				2	
30a	– 24t				1		161/3	– 3*11h				2	
32	Worm				1		161/5	– 5*11h				2	
33	Pawl				1		162/3	– 3*7h				2	
34	Spanner		1	1	1		162/5	– 5*7h		2	2	2	
35	Pivot Bolt		1	2	2		163/3	– 3*5h				2	
35a	Bolt 12mm				1	2	163/5	– 5*5h			1	2	
36	Screwdriver		1	1	1		164	Sector Pl				1	
37a	Bolt, long		20	75	150	50	170	Perf Pl 7*7h				2	
37ka	– short		10	25	50		301	Elec Motor				1	
37b	Nut		33	107	210	50	302	Coil, Core, Disc				1	
37c	Grub Screw (in some bosses)						303	Bulb & Holder				1	
38	Thr'd Pin		2	4	4		306/5	Fibre Strip				2	
38b	Domed Nut		2	4	4		309	Plug				2	
39	Spkt Chain				1		311	Cable				1	
40	Cord		1	2	2								

* Motor Set Nr.0301 G



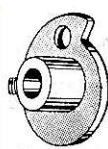
Flachband			
Nr. 01/25	25 Loch	15,8 cm lang	
" 01/17	17 "	10,7 "	"
" 01/11	11 "	6,9 "	"
" 01/9	9 "	5,6 "	"
" 01/7	7 "	4,4 "	"
" 01/5	5 "	3,1 "	"
" 01/4	4 "	2,5 "	"
" 01/3	3 "	1,8 "	"



Transmissionsschnur
Nr. 040 (2 m)



Luftschraube Nr. 041



Kupplungsmuffe
Nr. 063

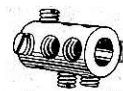


Handkurbel mit Stellschraube
Nr. 062

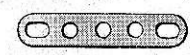
Nr. 061
Nockenscheibe

Schraubenschachtel

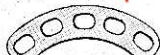
Oberteil Nr. 065
Unterteil Nr. 065 a



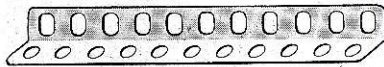
Anleitungsbuch Nr. 071 a



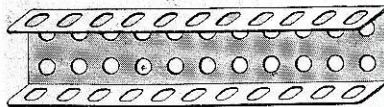
Flachband m. Schlitz
Nr. 02/5



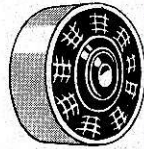
Bogenband
Nr. 03/5



Winkelträger			
Nr. 08/25	25 Loch	15,8 cm lang	
" 08/17	17 "	10,7 "	"
" 08/11	11 "	6,91 "	"
" 08/7	7 "	4,4 "	"
" 08/5	5 "	3,1 "	"



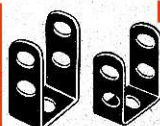
Doppelwinkelträger
Nr. 09/25 15,8 cm lang
" 09/11 6,9 "



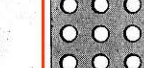
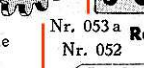
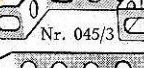
Flugzeugmotor
Nr. 042



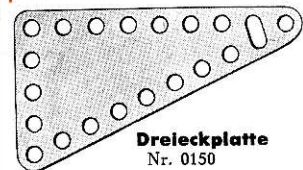
Motorhalter Nr. 043



Nr. 044 Nr. 044 a
Lagergabel



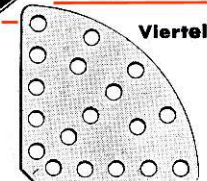
Großer Ring Nr. 068



Dreieckplatte
Nr. 0150



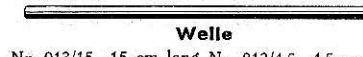
Halbkreisplatte
Nr. 0151



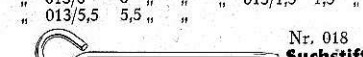
Viertelkreisplatte
Nr. 0151 a



Flachstück Nr. 010



Führungsbügel Nr. 011



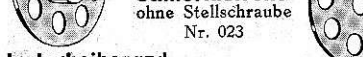
Winkelstück Nr. 012



Welle
Nr. 013/15 15 cm lang



Nr. 013/10 10 "



" 013/7 7 "



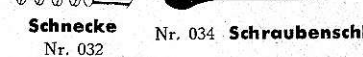
" 013/6 6 "



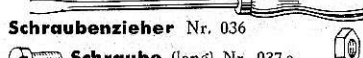
" 013/5,5 5,5 "



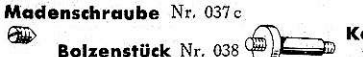
Nr. 013/4,5 4,5 cm lang



" 013/3,5 3,5 "



" 013/2,5 2,5 "



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#091/21 & /22, now hard, are 33 & 19½mm o.d. off the Pulley. The larger one has 'MÄRKLIN' on each sidewall; #/22 has no marking. Of the **Flexible Plates** only the two smallest have been seen. They are aluminium only .2mm thick and easily distorted. The **Plates** #0150 to 0154 may be thicker – #0154 is used unsupported as an aircraft wing (if they are painted could they be steel?). The **Motor** #0301 (right) was 20v a.c: its dimensions, from an ad, 4.5*3.5*5.5cm. Its sideplates were Bakelite and the lever switch on the front gave forward & reverse. I'm not sure what the protrusion bottom left is – it isn't shown in other photos. It may be one of the male connectors out of position. The front of a 4-page Leaflet with the Motor, PR 0939, showed a workshop with it driving line shafting to 6 or so machine tools.



Fig.5

The SETS While this system is distinguished by the size of the parts, it is not limited by their range. 114 are listed including the Motor & electrical parts, and all were used in the 3 main outfits: 01, 02 & 03, and a Motor outfit, 0301G. See Fig.3 (lengths are given by the number of holes following the slash in the PNs, or in centimetres for the Axles). There were also connecting outfits 01A & 02A, and the Motor was available separately. The range of outfits seems fairly small for a system with so many different parts. In terms of their quantities, the 3 main sets, ignoring the Paper Clips in them, correspond to somewhere between Sets 0 & 1, 2 & 3, and 4 & 5 of the standard MÄRKLIN range, though with many differences in their composition.

Set boxes were red with labels identical to the manual cover in Fig.1. They were large, from 34½*26½*2¾cm for the 01 to 54*39*4½cm for the 03, and the parts were clipped, mostly individually, to a card, or two for the 2-layer 03. Said cards were part blue, part cream, but all blue for the second 03 one.

The MANUALS #071a for Sets 1-3 has 96 pages, 253*178mm, plus covers, and the front is shown in Fig.1. pp1-16 are printed on pink paper. The PR is TON 0639 r on p1. pp1-2 has the Intro, pp3-11 Basic Constructions, and pp12-16, after one page about circuit diagrams, has 9 electrical models. Some are details e.g. an electromagnet for a Crane; some complete models e.g. an electrically operated Railway Signal. In all they run from Nr.46, 3 batteries in parallel, to Nr.54 Unterbrechermotor – an Electric Engine with a Coil as its single cylinder.

The 100 models for Set 01 are on pp17-43, from Nr.01-1 Säge (2-handled Saw) to 01-100 Panzerkreuzer (Warship). There are 0- & 00-gauge railway models, 13 in all, with a Level Crossing Barrier for both gauges, an 0-gauge Buffers, and the rest Signals various. The other models include a wide range of domestic items, small trucks, carts, trucks, a Lorry, aeroplanes, guns, machine tools, windmills, cranes, & ships. Most are reasonable models considering the size of the Set. Good use is made of the Tin Lid & Base, but the Set's 2 Flexible Plates are only used in a few cases.

There are 36 models for 02 from No.02-1 Schlepper (Tractor) on p44 to Derrickkran on p71. Again a good selection of appreciably more interesting

models but with emphasis on machine tools (10), Cranes (7) & commercial vehicles (4). There are no railway models. The Flexible Plates are more in evidence though with only 3 in the Set a Lorry looks rather skeletal. Mechanical features are largely confined to cord drives, centre-pivot steering on the Tractor, and luffing on two of the Cranes. None of the Cranes has a means of preventing undemanded lowering of the load. Two models that caught my eye: a pretty Flying Aeroplane Roundabout (Fig.9), and a Futterschneidmaschine (Food Slicer).

The 13 03 models are more advanced and are more or less fully plated where appropriate. They run from 01-1 Elektrische Klingel (Electric Bell, with the bell an Elex part not in the Set) on p72 to Großer Synchronmotor (with an 11cm Ø, 16 pole wheel driving a piston) on p87. Other notable models are an Eddy Current Brake, a Lorry with 'proper' steering, a similar Breakdown Lorry (Fig.10), a Grabbing Crane, a Crane similar to the one on the cover (the Beam Engine isn't in the Manual), a Gantry Crane (Fig.8), a Tram, & a Monoplane. And one railway model, a Loading Gauge.

Most of the models are new designs with few, if any, adaptations of the ½" models, and it is strange that they include so few motor vehicles. Just one Lorry for Set 02, another, plus a variant, for 03, and no cars at all. One 02 & two 03 models are driven by the Electric Motor mounted outside the model.

A good halftone is provided for each model, together with a Parts List, some line drawings of details where necessary, and constructional notes for some of the more complex models. Also an account of the real life subject in many cases.

p88 has a photo of an 85cm high Windmill 'super-model', and the next 4 pages carry ads for MINEX & other Märklin constructional sets. Then the Illustrated Parts on pp93-95, the Set Contents on p96, and another supermodel, a splendid Warship, some 130cm long, on C3, see Fig.11.

#070 GB is the English version for Set 1. It has 16 pages, 255*177mm, including covers, and the front is as Fig.1 but in B&W. The PR is A 0739 r on p3. p2 shows the parts in the Set & their quantities, pp3-4 has the Intro, & pp5-6 Basic Constructions. pp7-15 has the first 50 models of the 100 in the main manual, from Saw to Field Howitzer with Limber. p16 shows 6 models from the larger sets including an excellent 03 Overtake Steam Engine & Boiler that isn't in the main manual.

The MODELS Figs.6 & 7 give an idea of the look of actual models: the Railway Crane from my 02 set (plus the Gears & a standard MÄRKLIN postwar Flexible Plate under the model's outriggers); the Beam Engine from a Märklin brochure.

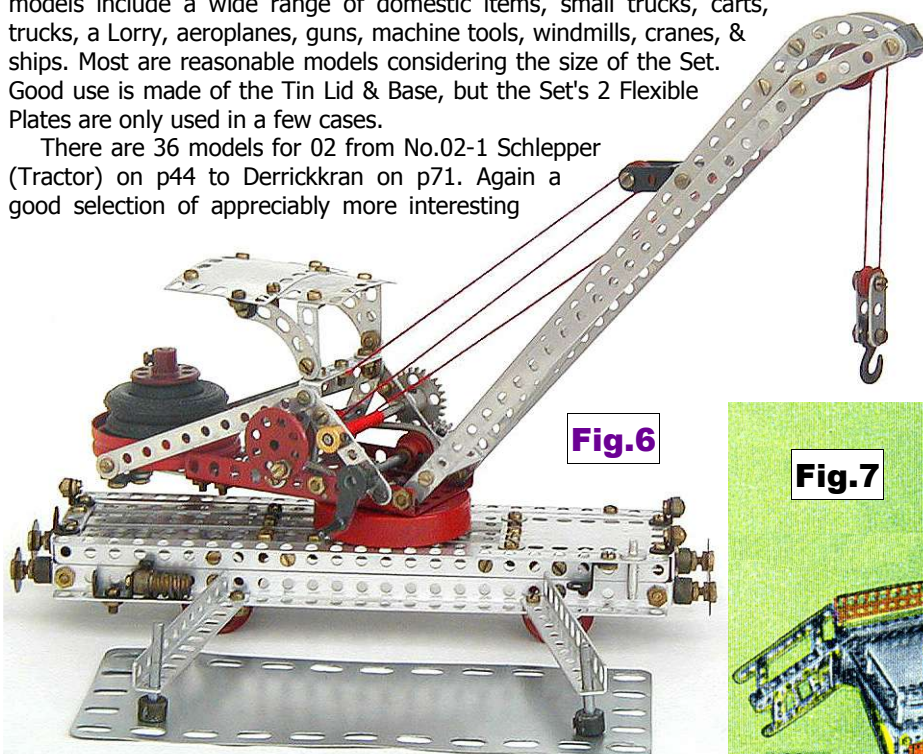


Fig.6

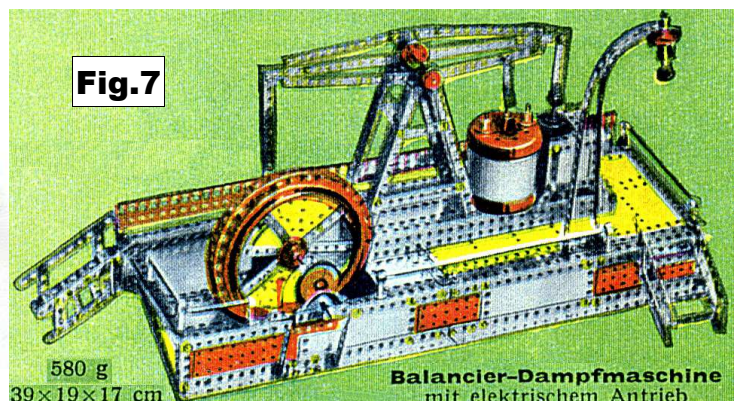


Fig.7

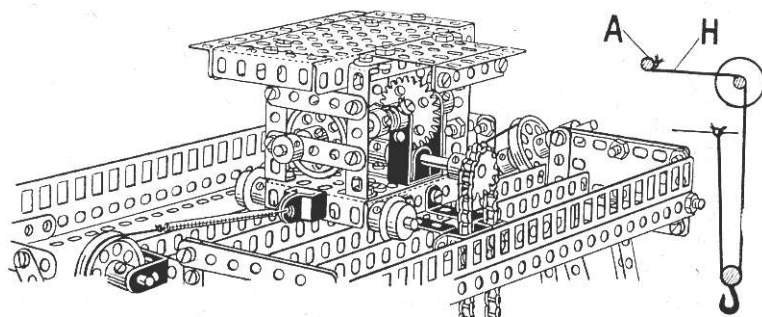
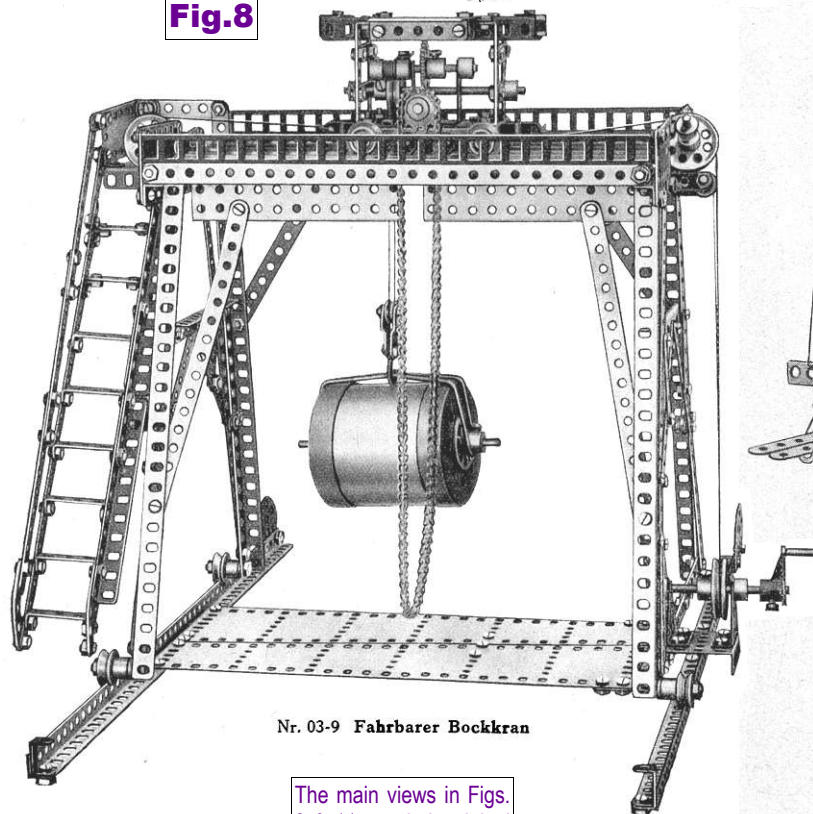


Fig.8



Nr. 02-5
Flugzeug-Karussell

Fig.9

Nr. 03-9 Fahrbarer Bockkran

The main views in Figs. 9 & 11 are their original size; those in Figs.8 & 10 are reduced to about 70%.

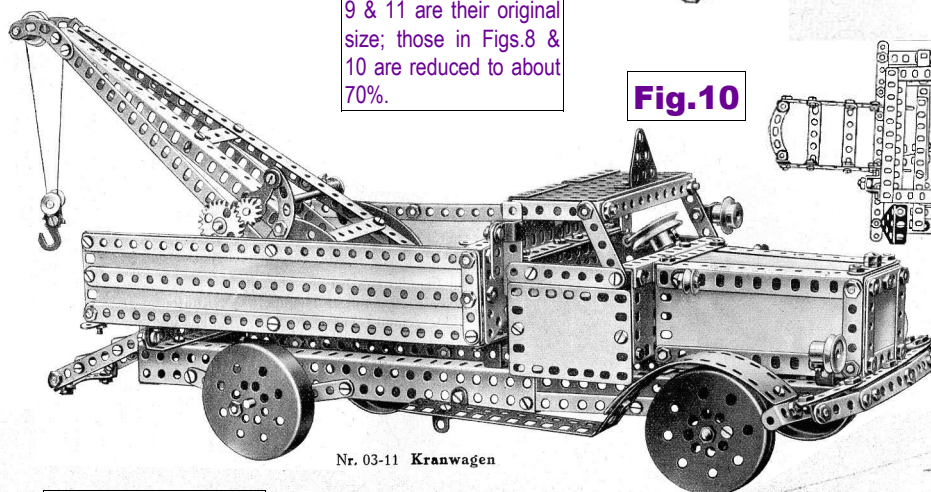


Fig.10

Nr. 03-11 Kranwagen

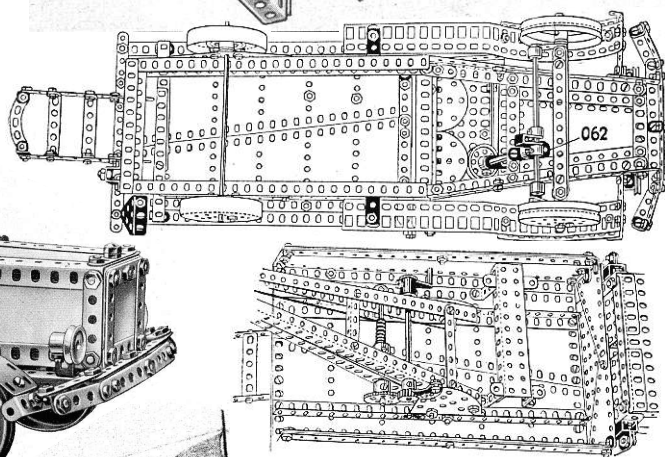


Fig.11

All the scrap views on this page are their original size but there were more of them in the Manual.

