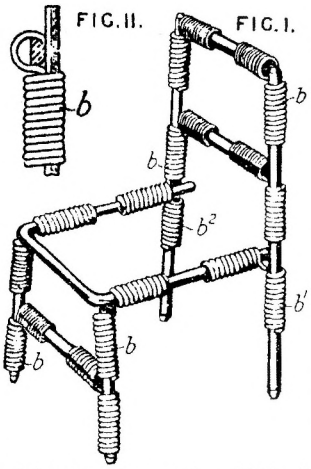
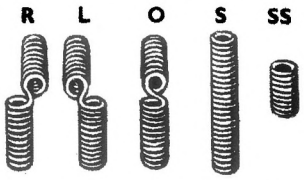
CLIFFIX This unusual UK system was patented in 1944 and no doubt appeared soon after WW2. It was very simple with just frameworks made from wire Rods pushed into 5 different types of spiral spring Connectors. It predates ULOXETTE (see 19/553) which worked the other way around, with lengths of spiral Spring joined by rigid Connectors. The 2 sizes of CLIFFIX sets known were called 'J' and 'M', and David Hobson kindly lent me one of each for this account, both very nearly complete and probably unused. Thanks also to Geoff Wright who let me examine another M Set, identical as it turned out to David's.



The patent, 592699, was in the names of W.Clifford, & Tinsley Wire Industries Ltd., the Wolverhampton firm that made CLIFFIX. The Chair opposite shows how the offset Connectors, b^1 & b^2, allowed crossing Rods to be joined. The Rods were to be an easy fit in the Connectors but the latter would be curved along their length and so grip the Rods. Rods could be joined end to end by a long straight Connector. It was also said that 'rods of half round section may be used and to join two intercrossing rods of this form, the rods are first threaded into a coil b with their flat surfaces in contact and then one or both is rotated (Fig.II) to distort the coil b in order to obtain a strong joint.' This idea was not used in CLIFFIX.



The 5 different Connectors are shown opposite. The actual right-angle Connectors are curved as described in the Patent - it is easy to push the Rods into them, and the curvature gives a reasonable grip. The long straight Connectors have varying degrees of curvature: those with little don't have such a good grip, and those with enough to grip well often leave the Rods rather out of line. The short Connector, SS, is meant to be used as an axle stop but the ones seen are loose on a Rod. The Connectors are about 3/16" o.d. and are nickel plated.

The Rods were made of galvanised steel wire, .096" Ø, straight from 1 to 15" long (called Rods), and in a variety of formed shapes: right-angle, U-shape, & circular (called Shapes). All are shown in MCS except PW, two of which form the outline of the propeller on the Aeroplane shown on the front cover. It is 6¾" long. Also the Circle labelled C1 in MCS should be C15. The number associated with the parts is usually the total length of the part in inches, with an end 5 denoting ½", or for circular parts, the diameter.

The only other two parts are made of wood, stained red. The Wheel is cylindrical, 1 1/16" Ø by .4" wide, with a bore of about ⅛"; the conical PN (Prop. Nose) is about .6" Ø and has a groove around its base that isn't shown in MCS. It forms the hub of the propeller.

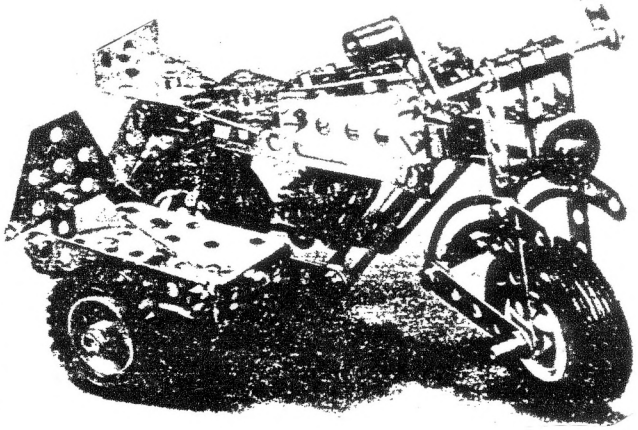
The sets are packed in green boxes that carry a 12*4" yellow label, as in MCS/FB, with a Bridge spanning two green hillsides. Also in small print 'Prov. Pat. Nos. 236168/44 1469/45', but the first should be 23168/44. The J box is 12*4*1⅛", and the M 15¼*4½*1¼"; neither bear any indication of the set's size. The Rods are in the bottom, each size held as a bundle by thin black rubber bands, together with the Connectors & Wheels in small card trays. The Shapes are held to a yellow card the size of the box, which sits on top of the trays. It has 'CODE CARD' at the top and an inch scale at the bottom; in between are the outlines of the parts, each with its PN, and the parts are held over them by red, elasticated cord. On the lid of the M Set lid is a price of 19/6 in pencil, about the cost of a MECCANO No.3 in the late 1940s.

The manual cover shown in MCS, & on the front of this Issue, is the same for both Sets. It is yellow and again has no indication of the Set No. The Model Nos. of the first 24 models start with 'D', followed by others with a J or M prefix, so perhaps a smaller D Set existed or was contemplated at one time. I wonder what D, J, & M signify. Apart from a page of small illustrations of 6 M 'supermodels', the J manual stops after some 'JM' models, which vary in size depending on which set is used to make them. The M manual has in addition 12 'M' models, but also in the M Set are 3 separate 9*14" Model Sheets which show the supermodels, plus two other large models, in detail. These are good size models: the largest, a Gun Boat, is 33" long, and a Big Wheel stands 23" high. The former uses nearly all the 144 Connectors in the Set, but only 98 of the 227 Rods. All models are shown as a line drawing with a Parts List, and a selection of them can be seen on the front cover of this Issue.

SUMMARY OF MANUAL •Name: CLIFFIX •Details of maker: TINSLEY WIRE INDUSTRIES LTD., Department "CLIFFIX", WOLVERHAMPTON, ENGLAND. •Dates &/or Ref Nos: none. •Page size: 253*105mm deep. •No. of pages: 16 unnumbered inc covers. •Language: English. •Printing: line drgs of models; yellow cover as MCS & p589 with colour ½tone of boy with Crane. •Page No. of Parts List/Set Contents & highest PN: 4,W. •Set covered: J. •No. of models: 39 inc 24 D, 12 J, 3 J.M models. •Name, Model No., Page No. of first & last model of each set: TABLE,D.21,5; SWORD,J.M.24,13. •Other notes: (i) The J.M models could be made in 2 sizes from the J or M Set. (ii) 6 sample large M models are shown on p14. (iii) The printer is on p15: STEENS (Wolverhampton) LTD., WOLVERHAMPTON.

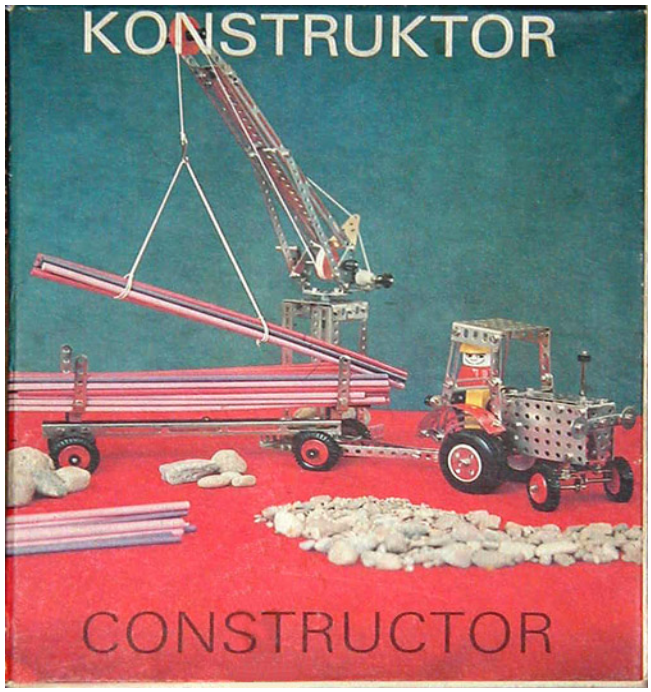
The manual for the 'M' Set is as above but with 24 pages (pp21-22 are blank); 12 M models go from M.5 GONG on p 14, to M.7 MOTOR BOAT on p19. The 6 sample M models are on p20 and are shown, plus 2 others, on 3 Model Sheets (230*353mm): M.21 GUN BOAT, M.29 TANK; M.13 WIRELESS STATION SHED, M.12 WIRELESS MAST, M.8 AEROPLANE; M.9 ROUNDABOUT, M.20 BIG WHEEL, M.10 WINDMILL.

'New' System - KONSTRUKTOR [14] This one is from Poland and Jeannot Buteux kindly sent brief details and a copy of the back cover of a manual There are 62 black painted steel parts plus some of plastic, all identical to the German CONSTRUCTION, except for the colour. The holes are 4.0mm Ø at 10.0mm pitch. The cover shows the Motorcycle & Sidecar below, which looks very similar to a No.03 CONSTRUCTION model in a 1980s manual, but with the Plastic Plates used for the seat of the motorcycle and the nose of the sidecar replaced by metal parts. Above the model is the name 'KONSTRUKTOR' & below 'CONSTRUCTOR'.



KONSTRUKTOR [14] A little on this Polish system, clearly inspired by the German CONSTRUCTION, was given in 21/596, and now two sets are to hand, one courtesy David Hobson. A label has been stuck on underneath one box; it is shown among the models on p817, and has the year 1987 written in on it. It also has the address given in the box to the right, but whether it is the maker's or a shop's isn't clear. The town, Sopot, is near Gadansk. SZKŁO means glass in the dictionary, and the top line may mean Craft Cooperative.

The box is white, 28½*35*3cm, and the lid is shown below. It has 'Made in Poland, on its sides. The Tractor &



Trailer, and a slightly simplified version of the Crane, are in the Manual, but the metal parts on the lid have a bright look and not the actual metallic black finish. Nothing remains to indicate how the parts were arranged in the box.

The Illustrated Part/Set Contents are given inside the lid and a 60% copy in shown overleaf. The inventory is very similar to the CONSTRUCTION C02 outfit but with a few changes. The extra parts include a some Brackets, about 20 N&B, 2 more 20mm Pulleys & Tyres, and two 35mm Pulleys & Tyres. No Grub Screws are included though (the blank line is where they might have been, as #049), nor the 60mm Pulley in the German Set. Not mentioned in the Parts List is an orange, card segment, marked 0-30, for use in a Letter Balance. It was found in one of the Sets and is just like its C02 counterpart – another card part in the C02 is an orange, square clock face for a 'pretend' Clock, and a similar part, no doubt missing from the Sets, is used in the corresponding KON [14] model.

The Parts At a glance all are just like CONSTRUCTION but there are very minor difference in many of them, and a few more obvious ones that are listed below, along with other points of interest.

• Except in the A/Gs, nearly all the **slotted holes** have large radius ends, and in the Face Plate & 50mm Disc they are almost square.

• At 62mm the **Flanged Plates** are 2mm wider than the German parts.

Leading Particulars

Name KONSTRUKTOR CONSTRUCTOR

Country Poland

Maker or name of a shop:
Spółdzielnia Rzemieś lnicz(a or ?),
Sopot,
ul. Pulaskiego 9/11 (ul.= street)

History Probably current in 1987.

Hole dia. 4.1mm in Strips; 4.2mm in most other parts.

Hole pitch 10.0mm.

Sets Only one.

Material/Finish All steel parts, except the N&B, have a chemical blackened metallic finish; Pulleys are a translucent red plastic.

Boss Face Plate: 11.0mm Ø blackened steel, 4.2mm bore; Bevel & Pulley #059: integral plastic, 10.0mm Ø, with an extension outwards for the tapping. All are single-tapped M4.

Fixing M4 steel N&B. Bolts: CH, 6.7mm Ø, BZP, 6, 8, & 22mm u/h. Nut: hexagon, 7.0mm A/F, nickeled.

Axles Nickeled with sheared ends, 3.99 -4.06mm Ø.

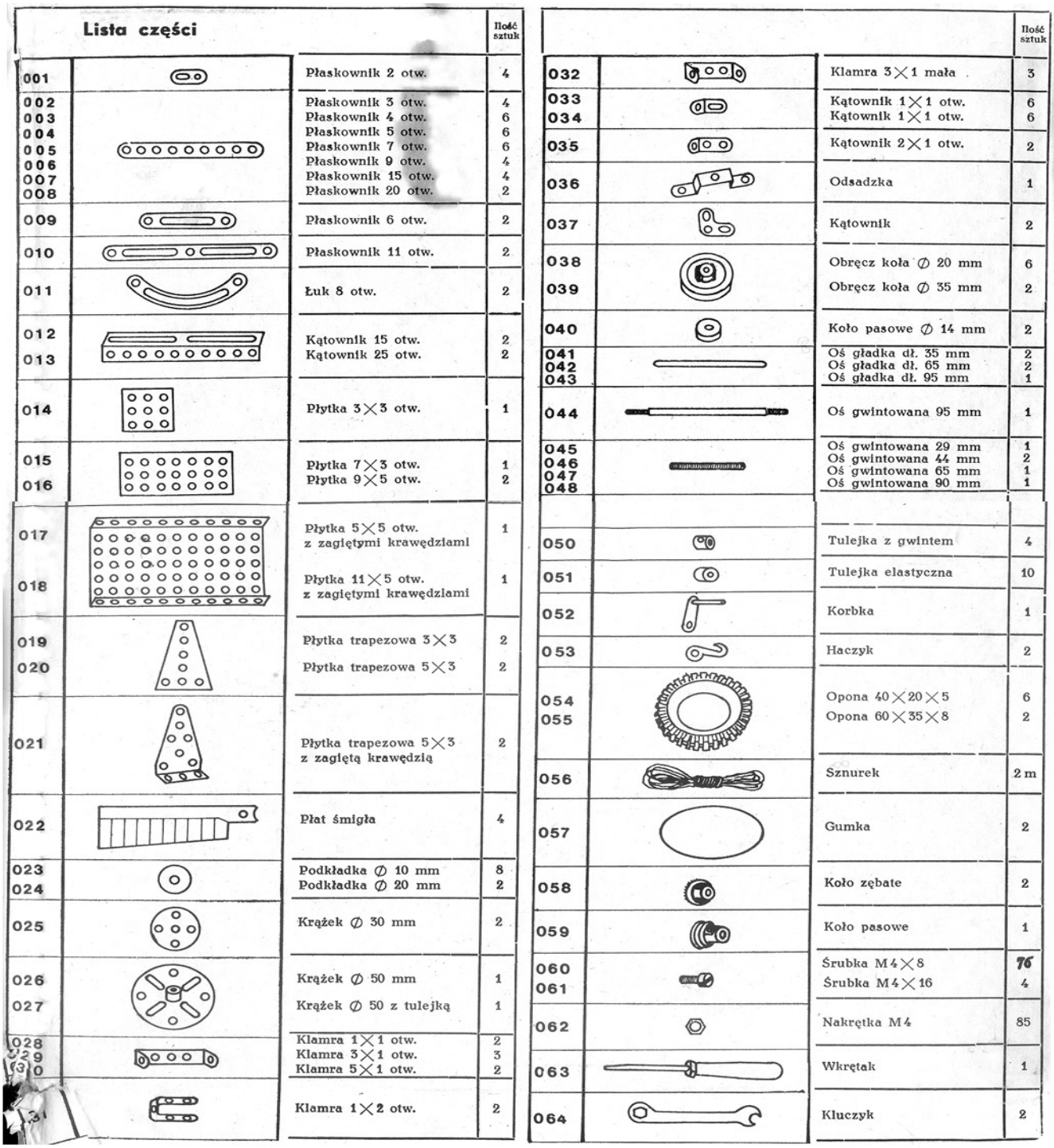
DP No Gears other than the Bevel.

Motors None.

Remarks The parts are very similar, but not identical, to the German CONSTRUCTION

• The **Windmill Sail** is almost the same size but is made of a dull yellow, rather rubbery, plastic.
• The **Washer**, #023, is 9mm o.d.
• The **Pulleys** are in a red, translucent plastic. The 20mm is similar to the CONSTRUCTION part with a 3mm deep boss on each side. The bosses on the 35mm are even shallower, whereas the German part has a proper tapped boss. The small Fast Pulley (#059) is 14mm o.d.
• The **Tyres** are rubber and the 35mm is only 52mm o.d., against 57mm for the CONSTRUCTION part. At 13½mm it is also narrower - a much fatter Tyre is shown in the manual models, with, apparently, a white hub (as on the lid).
• The smooth centre part of the **Axle with Threaded Ends** is 3.90mm Ø.
• The shiny black plastic **Collar** is 10.0mm Ø & 9mm long, and, like the plastic bosses, is extended on one side for the tapping.
• The pin of the **Crank** (#052) is only 3.5mm Ø.
• The **Bevel** has 22 teeth, like the German version, but, like the Collar, it is shiny and not a dull black plastic.
• The **Screwdriver** is 120mm o/a with a 57mm plastic, cruciform section handle, red in one Set & black in the other.
• The **Spanner** is similar to the CONSTRUCTION pattern but at 74mm o/a is 6mm shorter o/a.

The **Manual**, in Polish, has 16 unnumbered pages, 145*202mm deep, and the B&W front cover was described in OSN 21, but it was wrongly said there that it was the back one. p2 has an Intro and the PR, Druk: ZGG z. 1342. 10 000 egz. L-3 // Fot. St. Ossowski. pp3-4 show some basic constructions, and the models take up the rest of the manual. There is a parts list and a photo for each, with extra

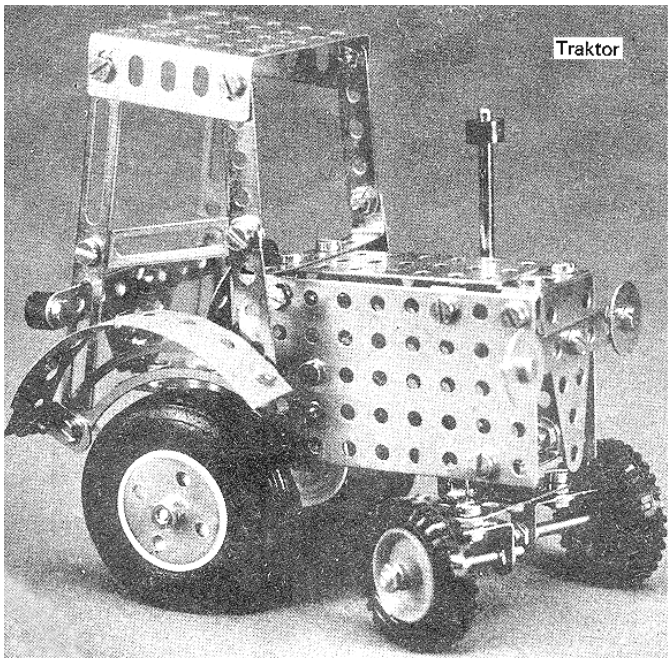


Lista części

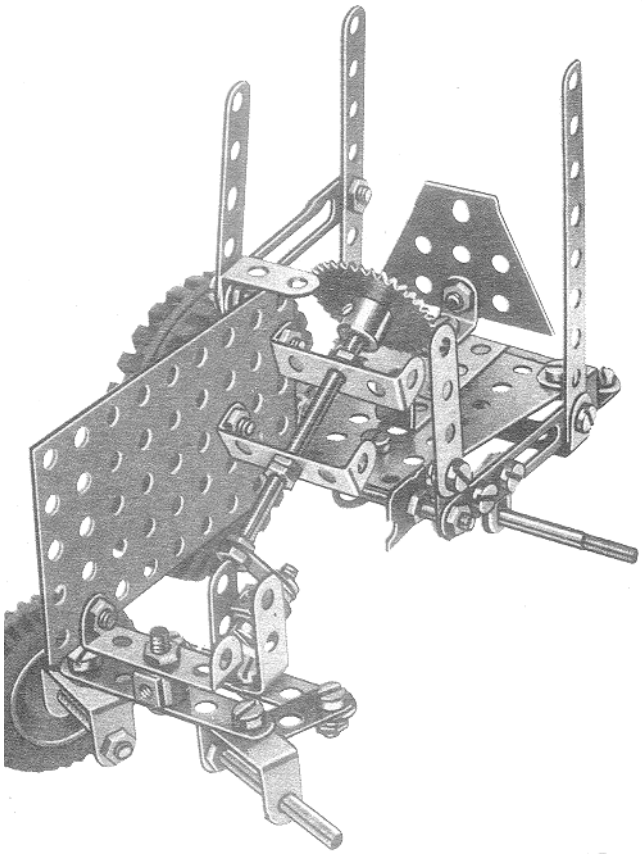
		Ilość sztuk
001	Płaskownik 2 otw.	4
002	Płaskownik 3 otw.	4
003	Płaskownik 4 otw.	6
004	Płaskownik 5 otw.	6
005	Płaskownik 7 otw.	6
006	Płaskownik 9 otw.	4
007	Płaskownik 15 otw.	4
008	Płaskownik 20 otw.	2
009	Płaskownik 6 otw.	2
010	Płaskownik 11 otw.	2
011	Łuk 8 otw.	2
012	Kątownik 15 otw.	2
013	Kątownik 25 otw.	2
014	Płytka 3×3 otw.	1
015	Płytka 7×3 otw.	1
016	Płytka 9×5 otw.	2
017	Płytka 5×5 otw. z zagiętymi krawędziami	1
018	Płytka 11×5 otw. z zagiętymi krawędziami	1
019	Płytka trapezowa 3×3	2
020	Płytka trapezowa 5×3	2
021	Płytka trapezowa 5×3 z zagiętą krawędzią	2
022	Płat śmigła	4
023	Podkładka ∅ 10 mm	8
024	Podkładka ∅ 20 mm	2
025	Krążek ∅ 30 mm	2
026	Krążek ∅ 50 mm	1
027	Krążek ∅ 50 z tulejką	1
028	Klamra 1×1 otw.	2
029	Klamra 3×1 otw.	3
030	Klamra 5×1 otw.	2
031	Klamra 1×2 otw.	2
032	Klamra 3×1 mała	3
033	Kątownik 1×1 otw.	6
034	Kątownik 1×1 otw.	6
035	Kątownik 2×1 otw.	2
036	Odsadzka	1
037	Kątownik	2
038	Obręcz koła ∅ 20 mm	6
039	Obręcz koła ∅ 35 mm	2
040	Koło pasowe ∅ 14 mm	2
041	Oś gładka dł. 35 mm	2
042	Oś gładka dł. 65 mm	2
043	Oś gładka dł. 95 mm	1
044	Oś gwintowana 95 mm	1
045	Oś gwintowana 29 mm	1
046	Oś gwintowana 44 mm	2
047	Oś gwintowana 65 mm	1
048	Oś gwintowana 90 mm	1
050	Tulejka z gwintem	4
051	Tulejka elastyczna	10
052	Korbka	1
053	Haczyk	2
054	Opona 40×20×5	6
055	Opona 60×35×8	2
056	Sznurek	2 m
057	Gumka	2
058	Koło zębate	2
059	Koło pasowe	1
060	Śrubka M4×8	76
061	Śrubka M4×16	4
062	Nakrętka M4	85
063	Wkrętak	1
064	Kluczyk	2

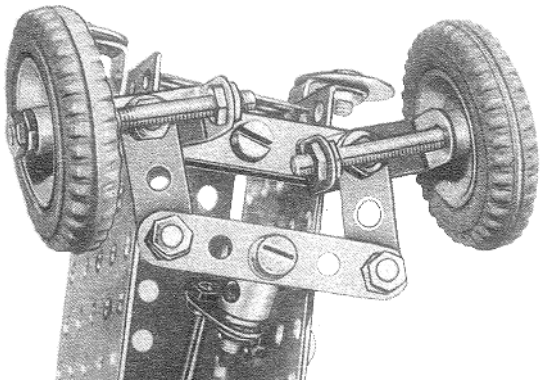
views of some, but the photos are poor, too dark, and on poor paper. Using English names, the 16 models go from A1 Folding Step Ladder on p 5 to Motorcycle & Sidecar on p16 (it is the one on the front cover, as shown in OSN 21).

Most of the models are identical, or very similar, to those for sets C01 or C02 in the 1980s CONSTRUCTION manual. A few, including the 2 shown opposite, are modified C03 models. The Jet is rather better than its German counterpart. The Tractor has a neat steering mechanism. A Flat Bracket on the threaded end of the steering column acts as a crank, and has a Long Bolt carrying a Collar through its free hole. The Collar engages in a 2h deep Double Bracket bolted to the centre of the track rod. It works even better if the Collar is replaced by something metallic, a stack of washers for instance. (For better clarity the photos of this mechanism are from the CONSTRUCTION manual - it has a Gear instead of a 30mm Disc as a steering wheel, but is otherwise very similar to the Polish version.) There seems no part in the Set to use as the mudguard, but as it is shown red on the lid, perhaps it is a card or plastic part missing from the Sets.



002	3
001	1
004	6
005	1
006	1
009	1
010	2
011	2
015	1
014	1
017	1
016	2
019	1
021	1
020	1
029	1
030	1
031	1
033	10
034	6
035	1
025	1
024	2
028	2
032	3
038	2
039	2
054	2
055	2
045	1
046	2
047	1
042	1
044	1
050	2
051	4.





002	2	031	2
001	2	033	3
004	2	035	2
007	4	038	3
012	2	042	2
013	2	048	1
015	1	046	1
024	1	051	2
020	2	058	2
029	2