'New' German System: TUBUS As one might expect from its name this system is based on tubes, and it has them in no less than 3 diameters, sized to slide inside one another. This account thanks to Urs Flammer who kindly supplied details of his outfit.

TUBUS was patented (Nr.861371) in December 1952 by Dr. Fritz Steinberg of Düsseldorf-Eller, though the application was made in July 1949. His Düsseldorf address is given in the set's Instructions as Deutzer Straße 77.

The PARTS Fig.A shows those described in the Patent; the actual parts, at about 60% full-size, are shown in Fig.B. The Instructions show the use of various parts and some are shown in Fig.C. The Fig.B parts are listed below with made-up names and with some lettered in green for clarity. The Pulley is aluminium, all the other parts are steel.

Tubes. Seamless with o.d./i.d. of 5.0/4.2, 4.0/3.0, 2.8/1.8mm, and their respective lengths are 300,205,75,30; 200,75,80,30; & 200,75, 60,40mm. In general they are, at least as found, not straight enough to slide readily inside one another.

End (a) **& Angle** (b) **Fittings**. These push onto the Tubes. The End Fitting is in 3 sizes to suit the the 3 Tubes. The sole Angle version is for the largest, 5mm, Tube. Both types have 4.5mm holes in their lugs.

The Patent shows both types with a raised 'key' (6) and alternative gaps (2) & (7), the latter to engage with the key. Keyed parts can be seen in Fig.D with the keys arrowed, engaging with various Fittings. The key of course prevents the parts from turning relative to one another and aligns their lugs precisely.

Clamp Fitting (c). The 2 sizes push onto the 5 & 4mm Tubes, and again the lug holes are 4.5mm.

Plate. 25*76*.5mm. It is suggested that it could be used as a windmill sail and is shown with its long edge clamped between the lips of the lugs of Clamp Fittings ('11' in Fig.C), though the lower Bolt looks to pass through a hole or notch near the edge of the Plate.

Wheel Segment (d). There is a hole in each flange and 4 bolted together through these holes, plus an Angle Fitting, give a wheel of 40mm Ø, see '13' of Fig.C.

Pulley. 20mm Ø with a 4.5mm bore.

Hook. But see also Fig.I.

N&B. M4; the Nut is 8mm A/F.

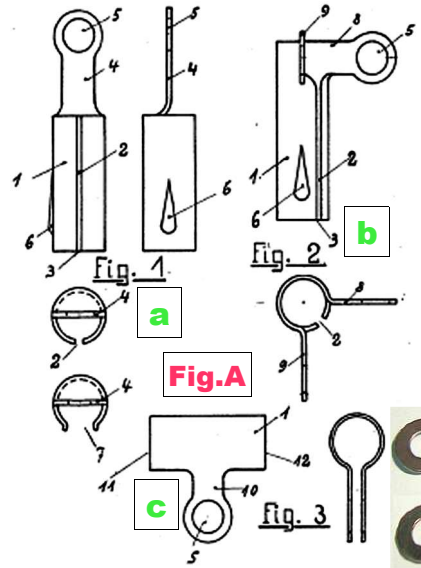

Fig.A

Tools. The 2-ended Screwdriver is needed to bolt the Wheel Segments together.

Link. This part is shown at '15' of Fig.C. Its holes are at 26mm pitch and one example of its many uses is in the top of tower structure at '14' Fig.C.

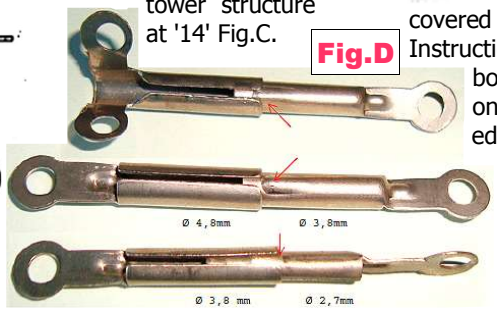

Fig.D

The SET. Only one size is known though there is a reference to add-on sets in the Introduction of the Instructions: Tubes, Fittings, Clamps & Wheels are mentioned.

The box measures 335*245*35mm and the lid is


Fig.E

Fig.C

covered by a label identical to the cover of the Instructions in Fig.F but with an added narrow blue border. The base is at Fig.E above: 2 sets seen on Ebay have the wide lengthwise bay partitioned into 3 by black trays in one and white card in the other, but neither look original.

The INSTRUCTIONS. These are on 4 portrait format pages formed by a sheet 325*232mm folded in two with the Fig.F cover. A lengthy Introduction includes, as

Fig.B

Fig.F

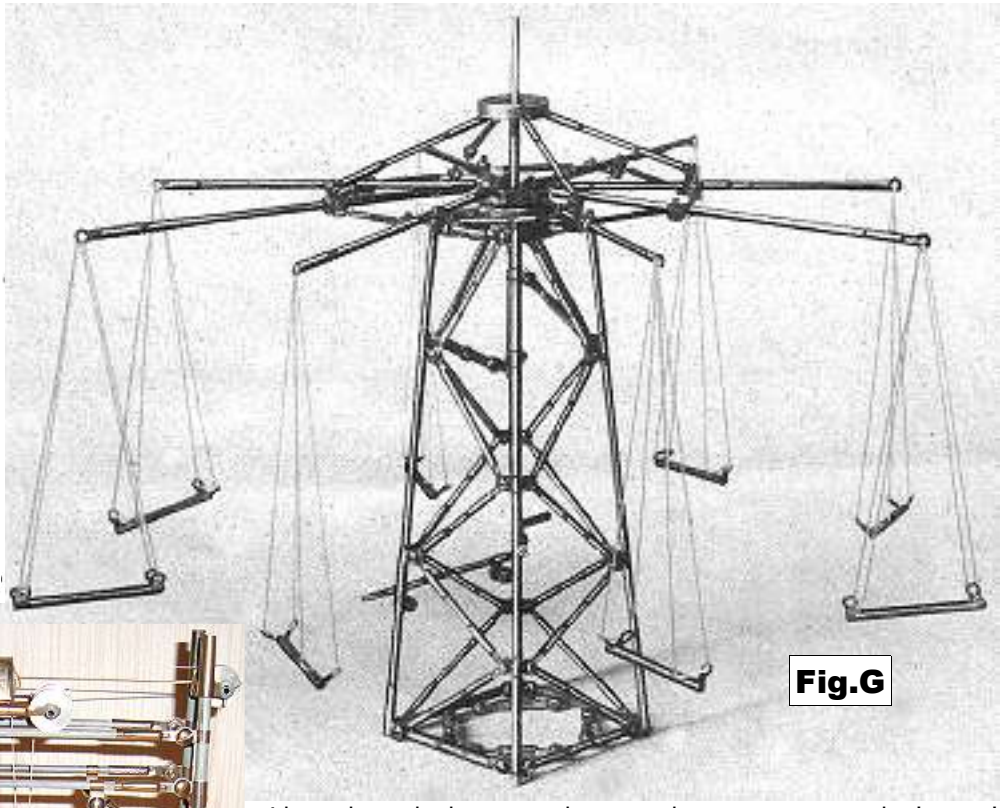

Fig.G

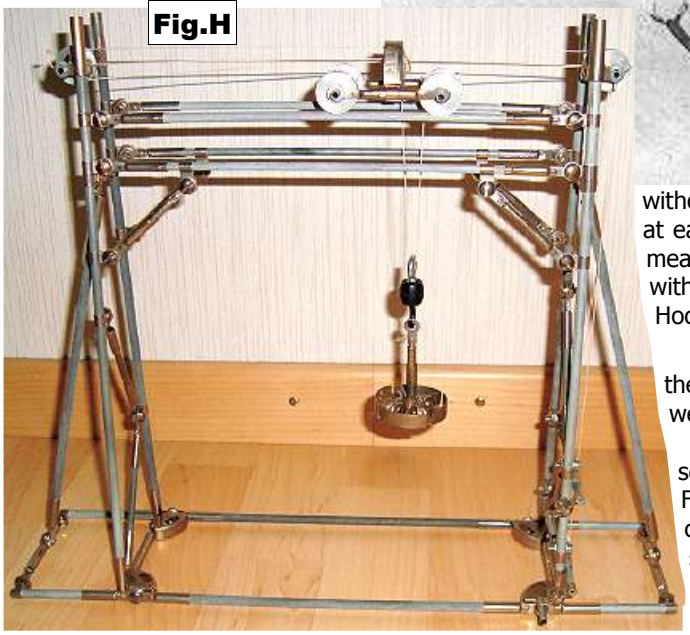

Fig.H

without the arched structure between the narrow rectangular 'towers' at each end; a Double Swing Boats, a neat model but again with no means of driving it; and a Gantry Crane, similar to Urs model left but with some slight changes, to the crab for instance, & the substitute Hook (in the TUBUS version it is as on the Crane above).

REMARKS. Urs told me that he had had no problems in building the Gantry Crane and a small Bridge structure. Also that the models were rigid and sturdy.

3 sizes of Tube are perhaps a luxury in a system of this size and some additional parts would be a great advantage: other types of Fitting for instance (even though the ones provided seem well chosen), and parts such as fast Pulleys. But perhaps the add-on sets would have provided them.

TUBUS broke new ground with its three sizes of Tube and neat Fittings. And it obviously had potential for development but, sadly, it seems not to have survived for very long.

already explained, mention of add-on sets, and there is also a request for ideas for structures etc using the parts.

The Introduction is followed by a Guide to using the parts. It gives Tube lengths which differ from those found: 300,200,75,60,25mm for the 5mm Tubes, and 200,75,60,40mm for the 4mm (& for the 3mm, as found).

The MODELS. The 6 models are on 5 single sided model sheets 210*146mm and they simply show the models with no text at all, not even the name of the model or of the system.

Three models are shown in Figs.G & I. To my eyes the models look the part but they lack mechanical refinements. No means of driving the Roundabout is provided, and it might be difficult to provide an external drive with the parts in the Set. The Crane's cord run hardly looks satisfactory but at least it would probably obviate the need for a hoisting brake. The Hook shown is quite unlike the one in Urs' set.

The other 3 models are: a worthy but rather dull braced Girder Bridge: it is similar to the one in Fig.F but

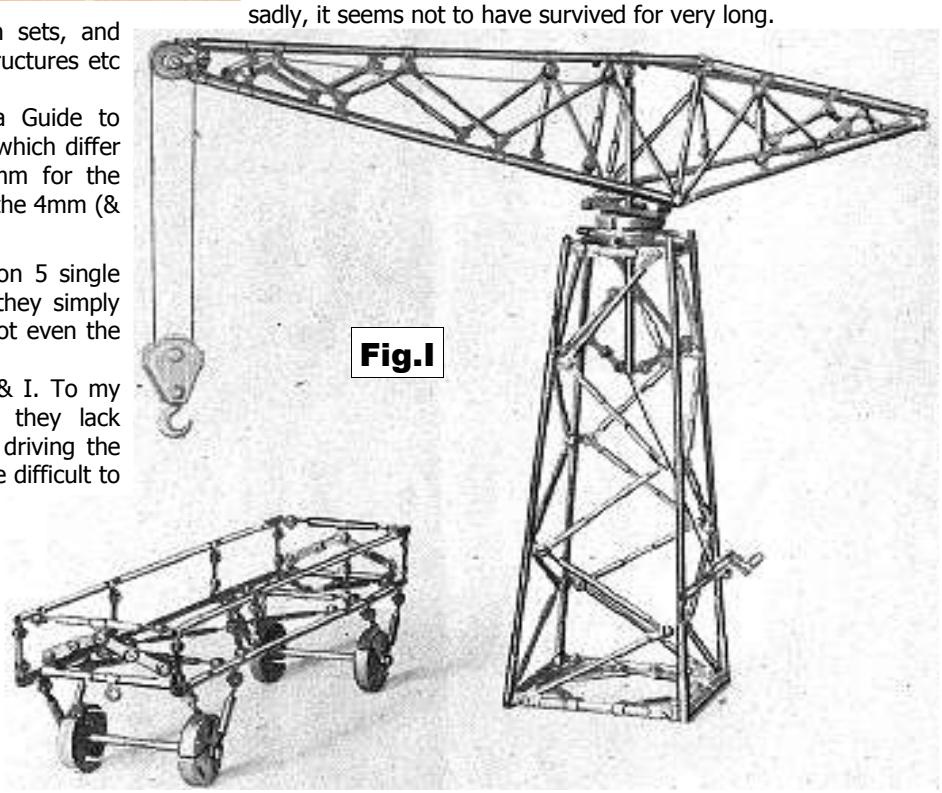

Fig.I