

'New' System, INSTRUCTO - THE MASTER TOY

Kendrick Bisset recently obtained a set of this hitherto unknown American system, and kindly sent photos, details and a copy of the manual. Frameworks are made from 4 different lengths of $\frac{1}{4}$ " steel Tube, rolled from tinplate, that push into, or onto, 6 types of Connector. In all there are 16 different parts.

The cardboard box is 387*285*46mm and the label on the lid is similar to the manual cover opposite, but enlarged to fill the area, and printed with red & white panels on a blue ground, with black lettering. Small, open, fixed card boxes subdivide half the bottom of the box to house the small parts, while most of the Tubes are in the other half. Above the Circular parts are clipped to a dark card which is hinged to the box along one edge. The parts found are as follows:

- 6 each of 1", 2", 5" & 9" long Tubes, nominally $\frac{1}{4}$ " \varnothing , with the joint not fully closed up (intentionally to fit some of the Connectors).
- 4 each of 6-spoke & 8-spoke Connectors (see Figs.1,3 below). Their outside 'diameter' is $1\frac{1}{2}$ " and the Tubes spring onto the spokes. They are made of 2 similar stampings, held together with tabs bent over between the spokes, and the ends of the latter are grooved in the style of a pulley.
- 15 Square Connectors (Figs.19,21). They slide inside the Tubes with the slot in the Tube sliding over the base of the Connector, and they can be positioned anywhere along the Tube's length.
- 8 Eye Connectors which slide into the Tubes, see Fig.8. The 'eye' hole is .27" \varnothing .
- 4 Straight Connectors, $1\frac{1}{4}$ " long and $\frac{1}{4}$ " \varnothing , turned from the solid with the last $\frac{1}{4}$ " at each end reduced to .23" \varnothing to fit into the Tubes.
- 4 Elbow Connectors (Fig.17) which look as if they have been bent from the Straight ones.
- 2 Perforated Discs, $2\frac{1}{4}$ " \varnothing , see Fig.14, with circles of 6 and 12 $\frac{1}{4}$ " holes.
- 4 each of $1\frac{1}{4}$ " & $2\frac{1}{8}$ " \varnothing Pulleys without boss (Fig.8), rather like M22a but with a wider groove, pronounced belting at the centre, and 4 holes in the face, $\frac{1}{4}$ " in the large one but much smaller in the $1\frac{1}{4}$ ".
- The 4 8-spoke Connectors are fitted with rubber Tyres which seat in the grooved ends of the spokes. They are $2\frac{1}{4}$ " o.d. and have MASTER TOY CO / LOS ANGELES moulded into the sidewall. Fig.11 shows a Tyre being taken off but



those in the Set have gone hard and can't be removed. Some of the models in the manual show the $2\frac{1}{8}$ " Pulleys fitted with Rubber Rings but none were found in the Set.

- 13 Sleeves, $\frac{5}{16}$ " long, which fit over the Tubes, and can act as collars, see Fig.8. They may be meant to close up the Tubes so that

the Pulleys turn freely on them, & are also used in some models to strengthen the joints, as in the Trailer shown later.

- 8 Plates about $2\frac{1}{4}$ * $5\frac{1}{2}$ ", made of natural colour card-stock similar to that enough to slide into Tubes. But it's not are original.

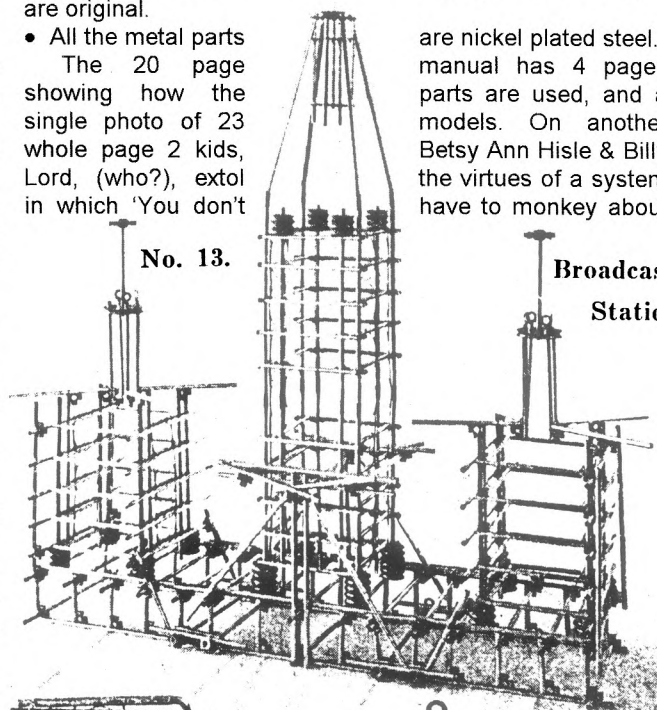
- All the metal parts

The 20 page showing how the single photo of 23 whole page 2 kids, Lord, (who?), extol in which 'You don't

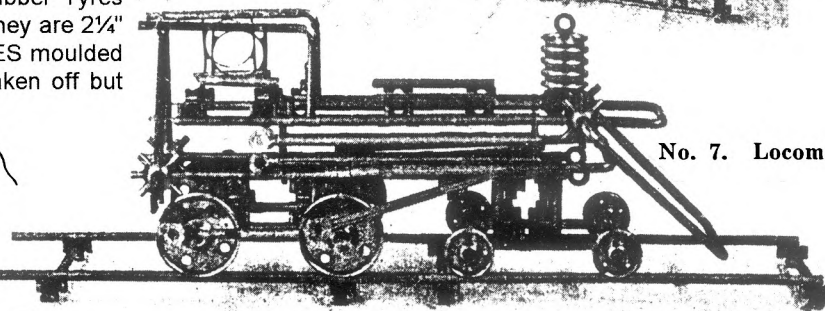
are nickel plated steel. manual has 4 pages parts are used, and a models. On another Betsy Ann Hisle & Billy the virtues of a system have to monkey about

No. 13.

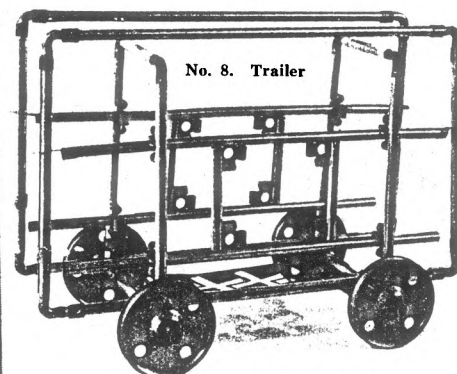
Broadcasting Station



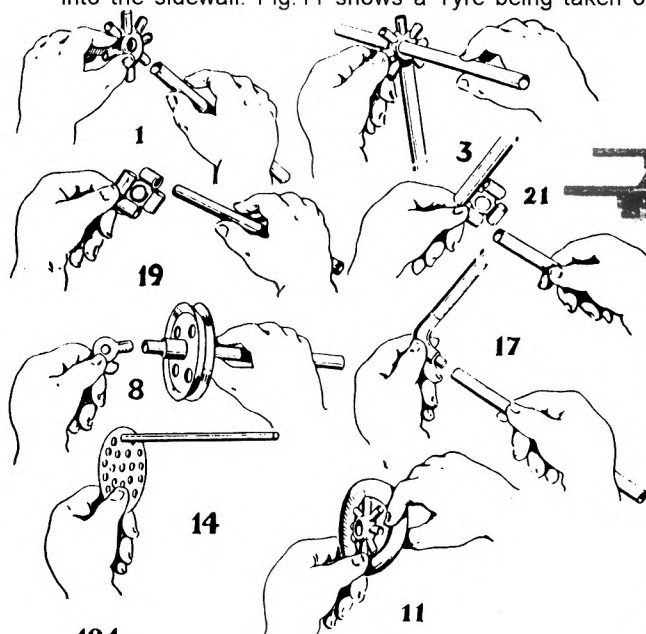
No. 7. Locomotive



No. 8. Trailer



No. 10. Picture Frame



with screws and bolts like you do with other sets', and the photos of the pair of them are also on the cover. The models range from the very simple Picture Frame to the quite large Broadcasting Station. Some include the Plates already mentioned, in more than one size, while others use panels, not in Kendrick's set, which seem to be the waste from the Connector stampings. Examples can be seen as the base of the Trailer, and as the side window frames of the Loco.

The firm on the box and manual is the Master Toy Co., Los Angeles, California; there's no firm indication of date but the clothes shown, the model of the Broadcasting Station, and a claim that 'INSTRUCTO is the only mechanical building toy manufactured that does away with screws, nuts and bolts', points perhaps to the early 1920s. There's also no indication that there was more than one outfit, and if

that's the case, either there were originally many more parts in Kendrick's set, or extra would be needed to make many of the manual models. It is said in the manual that additional parts could be bought from dealers or by mail.

SUMMARY OF MANUAL •Name: INSTRUCTO THE MASTER TOY. •Details of maker: Master Toy Co., Los Angeles, California. •No dates/Ref Nos. •Page size: 9"6¼" deep. •No. of pages: 20 inc covers (no page nos.). •Language: English. •Printing: B&W with photos of models, & red outer line on cover. •No Parts List or Set Contents. •Sets covered: not stated. •No. of models: 23. •Name, Model No., Page No. of first & last model: Truck,1,5; Du Jigger,23,11. •Other notes: pp2(IFC),4,12,19,20(OBC) blank; pp14-17 show construction details; PRINTED IN U.S.A. BY MAC PRINTING COMPANY / LOS ANGELES on p18; a Du Jigger is shown as a 2-wheel cart carrying 2 dolls sitting on cross bars, one above the other.

MASTER BUILDER After the notes in 16/450 Kendrick Bisset kindly sent a copy of a newly acquired MASTER BUILDER manual, intended for the smaller sets.

SUMMARY OF MANUAL •Name: THE "MASTER BUILDER" •Details of maker: As 16/450 but over stamped Removed to BUSH TERMINAL, BUILDING No. 6, BROOKLYN, N.Y. •No dates/Ref Nos. •Page size: 175*255mm deep. •No. of pages: 16+covers. •Language: English. •Printing: line drgs of models; cover as MCS. •Page No. of Ill. Parts & highest PN: 14,57. •Page No. of Set Contents & highest PN: 15/59. •Sets covered: 10,25,50,1. •No. of models for each set: 22,10,10,10. •Name, Model No., Page No. of first/last model of each set: 10: Easel, 1,3; See Saw,22,5. 25: Bed,23,5; Sand Sieve,32,6. 50: Carpenter Bench,33,7; Bleriot Monoplane,42,8. 1: Delivery Conveyor,43,9; Traveling Crane,52,11. •Other notes: No.2 Set boat models 53-57 on p12; prices of sets, as MCS, on p16, Speeder motor shown on IBC.

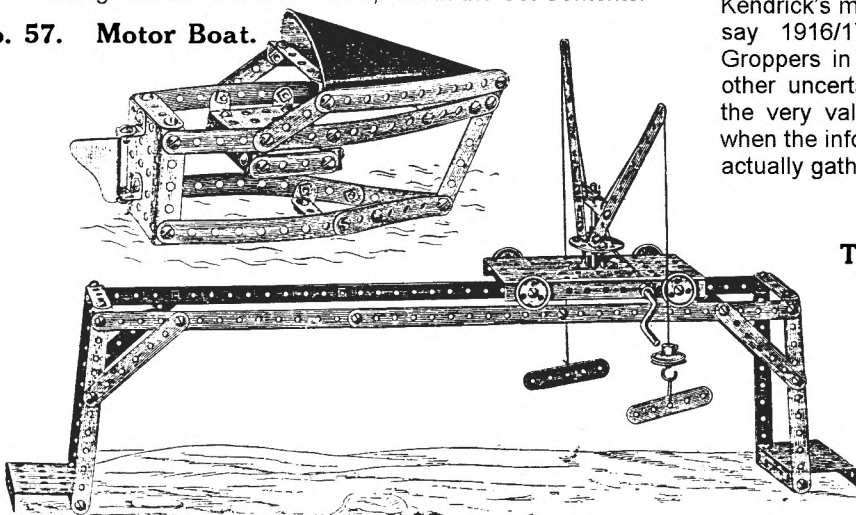
The general form of this manual is probably similar to the 20 page thicker one from which the MCS pages were taken. It is probably not the Pamphlet of Instruction, PN58, which was in Sets 10-50. First because the latter was 'Free', and that seems inappropriate for a 16-page item, when the 36-page standard manual was 25c. Also although the 5 No.2 models shown are clearly only a sample, the 10 No.1 models are the number claimed for that Set at the time.

There are more models in this version than in the earlier comparable manual described in 16/450. Many are the same, or in the same vein, but, particularly for Set 1, a few good new models are included. For example the Traveling Crane and Pile Driver below.

The 5 No.2 models consist of a Barge and 4 Boats of various sorts. It is claimed in a panel that 'Marine construction is a feature of MASTER BUILDER' [elsewhere Bridge & Auto Truck construction were also claimed as specialties]. Details of the Rudder, PN20, not clear in the Illustrated Parts, can be seen in the Motor Boat below - it has lugs top & bottom so can be pivoted on the Angle Brackets at the stern.

No models are shown as being for Set 20, nor is it mentioned in a panel on the back cover in which the number of models that can be built with each outfit is given. It is though in the Price List of sets, and in the Set Contents.

No. 57. Motor Boat.



No. 52. Traveling Crane.

Also on the inside back cover is an illustration (below) of the Speeder motor. It is obvious similar to the ERECTOR P58 but the sideplates differ in detail.

The printed address in the Manual is the 468 Broadway one but rubber stamped over it is: Bush Terminal, Building No.6, Brooklyn, N.Y.

Kendrick has also tried to trace the history of M B using the Thomas' Register of all U.S. toy makers, and the Industrial Directory of New York State. There was an Acorn Manufacturing Co. and it is listed in 1913 under 'sheet metal work of copper, brass & aluminum' at 33-37 Bleeker Street, New York. In the next available issue for 1916, Acorn is under Toys at the same address. It isn't in the 1917 edition but reappears from 1918 to 1923/24 (there was no 1919), but at 34 34th Street, Brooklyn. It isn't listed in 1924/25.

The other name mentioned in OSN 16 is M. Gropper & Sons, and they first appear in 1917, under Toys, at Bush Terminal, Brooklyn. The 1918 entry is the same but from 1920 through 1923/24 their address is the same as Acorn's in Brooklyn. Again they are not in the 1924/25 edition.

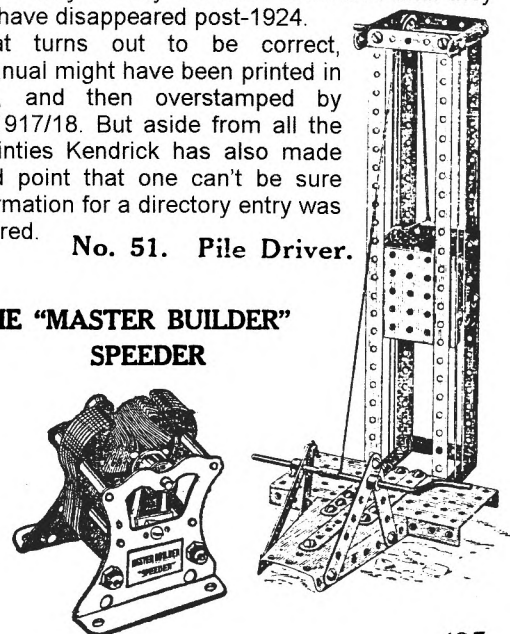
Another point of possible significance is that while the acorn logo is used in all the manuals mentioned in OSN 16, including the MCS one, it is not used in the one summarised above. In fact the only difference in presentation between the latter two is that the MCS edition has acorns on either end of the elaborately decorated MASTER BUILDER name at the top of most pages, but they are missing from the equivalent headings in Kendrick's.

So as a working hypothesis, Acorn started making and selling M B in 1915 (the date suggested elsewhere) or thereabouts, using the Broadway address as an interface. Groppers became involved around 1917 or 1918 while they were still at Bush Terminal, no doubt in control, hence no acorns, but not necessarily making the parts. The common address from 1919 or 1920 points to a probable close connection but M B may or may not have continued until they both seem to have disappeared post-1924.

If all that turns out to be correct, Kendrick's manual might have been printed in say 1916/17, and then over stamped by Groppers in 1917/18. But aside from all the other uncertainties Kendrick has also made the very valid point that one can't be sure when the information for a directory entry was actually gathered.

No. 51. Pile Driver.

THE "MASTER BUILDER" SPEEDER



Another INSTRUCTO Outfit Details of a set belonging to Kendrick Bisset were given in 18/494. The present set is basically the same, but is labelled as a No.1. It has no manual or the cardboard Plates but includes some metal fill-in Panels & 'Arches' – pieces which can be seen in the manual models, and which were the waste from stamping some of the main parts.

The Box is exactly as in OSN 18 except that it has a small round stick-on label on the lid's end apron which reads 'No.1 2.50'. Thus it seems that other sizes of sets may have at least been considered. At \$2.50 the set undercut the \$3 of the ERECTOR No.3 at the time (the 1920s), a set with 4 Spoked Wheels and 36 N&B. Fig.1 is the Set's lid, actually Kendrick's.

The Parts Fig.2 shows all the various parts except the Tubes (but with only the ends of the Panels). The 'standard' parts are: $\frac{1}{4}$ " Ø rolled Tubes, 1, 2, 5, 9" long; 5 types of Connector: 6-Spoke, 8-Spoke, 4-way Square, Straight, & Elbow; an Eye Connector; a Perforated Disc; 2 Pulleys; a Tyre; & a Sleeve. They are identical to those described in OSN 18, and their quantities are also the same.

The waste parts arise from stamping the Square Connectors (Panels 'A' & 'B', 1 of each) and the two Pulleys (Large & Small, Single & Double Arched Pieces, 'C' – 'F', with 1 each of the Single parts, & 10/6 of the Large/Small Doubles). All are of soft, untreated, steel. Panel A is $1\frac{13}{16} \times 14.9$ "; Panel B $\frac{7}{8} \times 13.7$ " with the hole at only one end.

Using the Parts The Tubes are not fully closed up and this gives them a good grip when pushed into the Disc, the centre hole of the Pulleys & Connectors, or onto the 'spokes', the Straight & Elbow Connectors, the 4 outer loops of the Square Connector, & the prong of the Eye Connector. Tubes can run freely in the eye. The Sleeve pushes over a Tube to act as a collar and it reduces a Tube's diameter enough to allow it to turn inside a Connector's centre hole, though not very freely. The waste parts push into a Tube's slot but are too thin to be held firmly unless the Tube has been at least partially close up.

Most of the manual models need more parts than are in the Set, & the remainder are rather dull, a Picture Frame & small Wheel Truck for example. I wanted to use the 2 Panels & the most obvious possibility was some type of aircraft. The manual offering (Fig.3, full-size) was a possibility but was ruled out by its looks (those spiky Connectors, odd tail & short wings). Also it meant cutting the Panels, & I couldn't work out from the rather poor photo how to journal the propeller shaft. Finally I made the Monoplane in Fig.4, with the tail surfaces & prop cut from suitable pieces of cardboard (as in Kendrick's set).

Driving the prop from the landing wheels (as in the manual model) proved impossible, mainly due to friction in the only bearings I could devise. The Panels forming the wings were over-lapped & 'woven' together by chord-wise Arches. It was necessary to hold a few parts together with the Clips, suitably reconfigured, that originally held the parts to the backing card – the fuselage side Tubes at the tail for example.

The main difficulties in building the model were the excessive force needed to push the Tubes into/onto the other parts, & the friction, already mentioned, of Tubes running in Connectors. Also if a Tube needed to be closed up at one point it could not then grip another part near it.



FIG.1

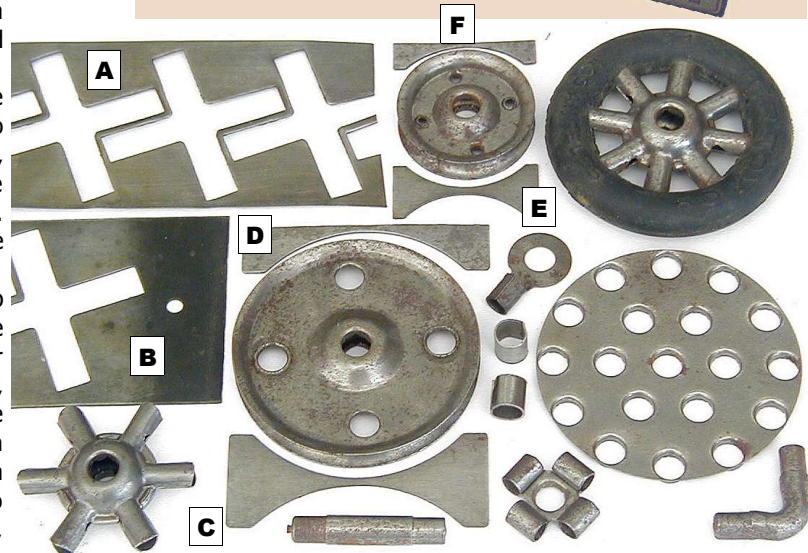


FIG.2

The finished model was reasonably robust.

Betsy Ann Hisle & Billy Lord These 'mystery' children (on the box lid, manual cover, and a whole page of the in OSN 18 but now, thanks to Google, they can be identified as child actors in the 1920s, quite famous in their day it seems.

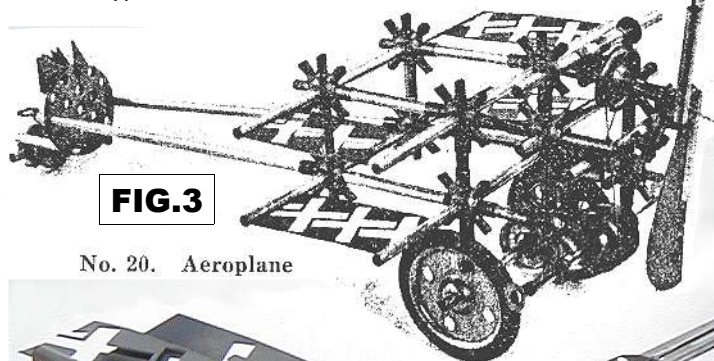


FIG.3

No. 20. Aeroplane

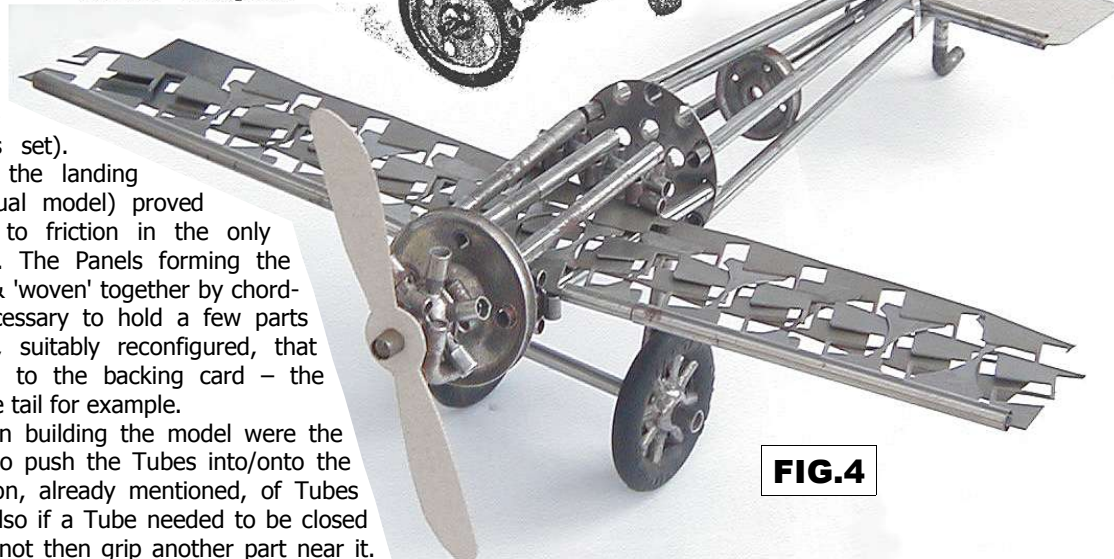


FIG.4