

ng is the same as that in the other Outfit. So on the face of it the N.Y. address was used well after Elizabeth opened in 1922, and perhaps up to some time in 1924. The tin plated parts in the N.Y. Set (see below) is a sure indication that they were produced at Elizabeth and not imported.

The finish of the parts in the two Sets is as follows:
Tin: all Strips, DAS, A/Gs; PNs 11, 12a, 44, 45, 90, 125, 126a.
Nickel: all Flanged Plates, Braced Girders; PNs 62, 116.
Brackets No. 10 and 12 are tin plated in the N.Y. Set and nickelled in the Elizabeth Outfit.

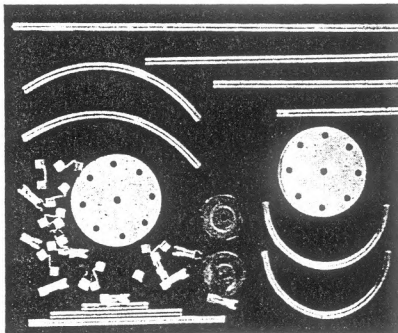
Some of the parts had been obsolete for some time in Britain. In the Elizabeth Outfit the Pawl is the first type (DMS 1276, replaced in 1921); the Screwdriver is the early

triangular shape (DMS 1822); one of the Pinions has 20 teeth (19 from 1920); and the 5½" Braced Girders have sharp corners (DMS Type A, obsolete in 1918). The 2½" ones have rounded corners. All these parts are missing from the N.Y. Set.

The 3" Pulley in both Sets is the 4-spoke type, replaced here by the slotted version in 1920. The one in the Elizabeth Outfit is painted black and has a normal ¾" dia boss, but the N.Y. one is nickel plated and its boss is ½" dia. The latter variant is not included in DMS.

Perhaps Liverpool sent all its outdated parts to the U.S. market, or perhaps obsolete tooling was sent to Elizabeth when production started there in 1922.

CLIP-CRAFT A CLIP-CRAFT set was mentioned in 6/136 in a list of items that George Wetzel had for sale. Now Kendrick Bisset has sent a copy of a page from the magazine *Popular Science* for December 1947 which gives a few details of this 'new construction set'. The accompanying illustrations are shown below. The main parts are the straight

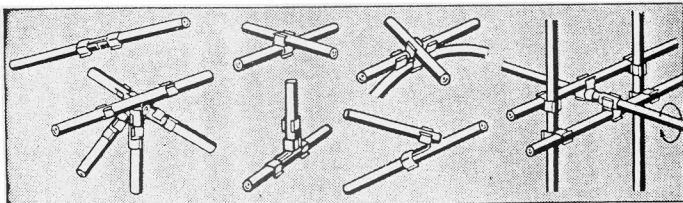


Using only these basic parts, hundreds of different toys can be clipped together. Arcs can be used to form complete circles.

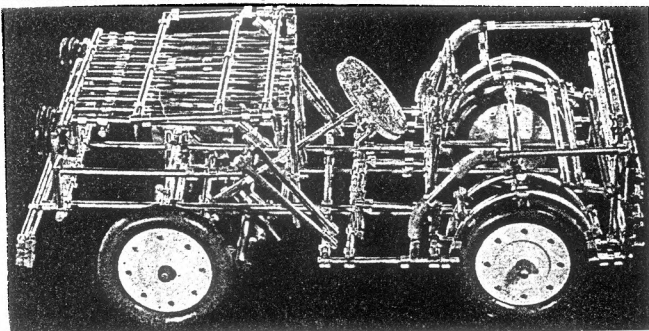
and curved aluminum Rods which are said to be held tightly together by the half dozen or so different, tempered steel Spring Clips. A tubular Bearing can be held in a Clip to allow a Rod to rotate or slide. Other parts that can be seen are two sizes of wooden Wheels (pulleys), with Tyres for the larger ones, and on the Jeep, Flexible Tubing to join Rods in-line at an angle, and Spring Clips or short tubular Collars to retain the wheels. Flat sheets of aluminum are 'furnished for covering surfaces of the models and for fashioning fins for planes', but how the sheeting is attached isn't mentioned. It is also said that 'the wooden wheels can be used for gears'.

No indication of the size of the parts is given but scaling from the illustrations, if the Rods were ⅛" dia, the large Wheels would be 2" dia, and the Jeep would be some 13" long.

The Set was made by the Clip-Craft Corp., of New York City. Yonkers, which is near New York I believe, was mentioned in OSN 6.



These are a few of the joints that can be formed by combinations of the rods, arcs, and clips. A bearing added to a joint makes it a support for rotating or sliding shafts.



MYSTERY PART No.5 Don Blakeborough sent a photocopy of the parts listed below and some of them reminded me of those from Gary Higgins, also from New Zealand, in OSN 3/47.

- Strips, 5-hole red and 15h light blue.
- A/Gs, 10*10mm in section, 5h light blue and 15h red.
- Perforated Plates, 5*5 light blue and 5*15h green.
- Flanged Plates with 10mm flanges on the two opposite sides underlined: 5*5 and 15*3 red; 7*3 13*5 green. Note that last one.
- All have 3.8mm holes at 9.5mm pitch; all the corners are square and all the holes are round.
- Green and red 1¼" dia Pulleys. A red 1½" dia Bush Wheel with 12 holes in the face at ½" radius. Both have brass ⅜" dia bosses, ⅝" long, double tapped ⅛" BSW, and bevelled as shown in OSN 3. The Collar is similar but ⅜" shorter. The bore of these parts is 3.5mm.
- Brass cheeseheaded ⅛"BSW Bolts, 9 and 17mm u/h, and hexagonal Nuts, ¼" A/F.

Don didn't mention whether the Pulley had the hatching on the top face, that Gary described.

MYSTERY PARTS No.23 These are the red 2" wide Flanged Plates with no holes in the top, and the 8-hole Strips, all made of aluminium. See OSN 11/283 and 12/329. With the notes above Don also sent a photocopy of some similar parts he has, which probably came from America. There's a 4-hole long Flanged Plate as well as 2 and 8h ones, and 4 and 16h Strips as well as 8h. In addition an Angle Bracket with round holes in both arms and a 'Half Pulley' of about 37mm dia. All holes are 4.7mm and all the parts are natural aluminium except the 2 and 8h Plates which are painted red. Finally a 4mm dia Crank Handle with 90° bends, 5¼" o/a with a ⅝" handle. That range of parts begins to look very like that of JUNIOR MECHANIC (12/327) except for the larger holes.

MYSTERY PART No.27 The medium red Semi-circular Plate opposite, with the two extra holes 1" from the centre hole on 45° radii. The holes are 4.1mm dia - too large for VOGUE - accurately spaced at ½" pitch. There's pronounced burr around much of the outer edge and some of the holes. It's possible that this is a BILT-E-ZE part although the extra holes aren't shown in the MCS illustrations. I've some other parts that I believe to be BILD-E-ZE and I'd be glad to hear from anyone who has parts that they are sure are from this system.

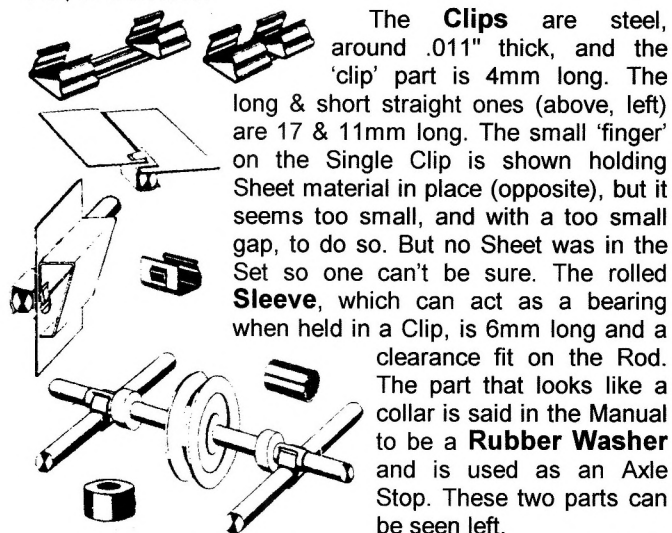


MYSTERY PART No.28 From Richard Symonds, a Flanged Sector Plate, 8 holes long and like the original MECCANO pattern (a single central row of holes) except that the holes are ⅜" dia. Also there is 4mm of metal outside the end slotted hole in each flange at the 3-hole wide end, and only 1mm at the other. The finish is black metallic and the part was found in a mixed lot of old U.S. parts.

More on CLIP-CRAFT This U.S. system was described in outline in 14/390, and now Kendrick Bisset has kindly sent more details from a No.1 Outfit he has acquired. It's not complete but the manual is with it.

The **Set** is in a tubular box, about 78mm diameter and 315mm high. The Clips are in two cardboard containers, 2¼" Ø and 1¼" high.

The **Rods** are aluminium, .171" (1¼") Ø, with square ends. The straight ones found are 20, 40 & 80mm long but 3 longer ones are shown in the illustrations of the parts in the manual. Two of one Curved Rod make a circle of roughly 80mm o.d.; 4 of the other make one of 160mm o.d., or a bit less.



Only one size **Sheet** is shown in the Illustrated Parts but several different sizes are used in the models including a small triangular one. Perhaps the modeller had to cut them to size. In the illustration above a formed triangular section is also shown clipped to a Rod.

The large wooden **Pulley** is yellow, 51mm Ø, 9mm thick, flat on one side and recessed on the other. A Rod will just turn easily in the centre hole, and a cord is shown through it to jam the Pulley to the Rod (left). A hard push is needed to put a Rod into the outer holes, and sections outside a hole had broken away in 4 out of the 5 Pulleys found. No small Pulleys were in the Set.

No **Tyres** are mentioned so perhaps they were in one of the larger sets mentioned in the Manual, or came later.

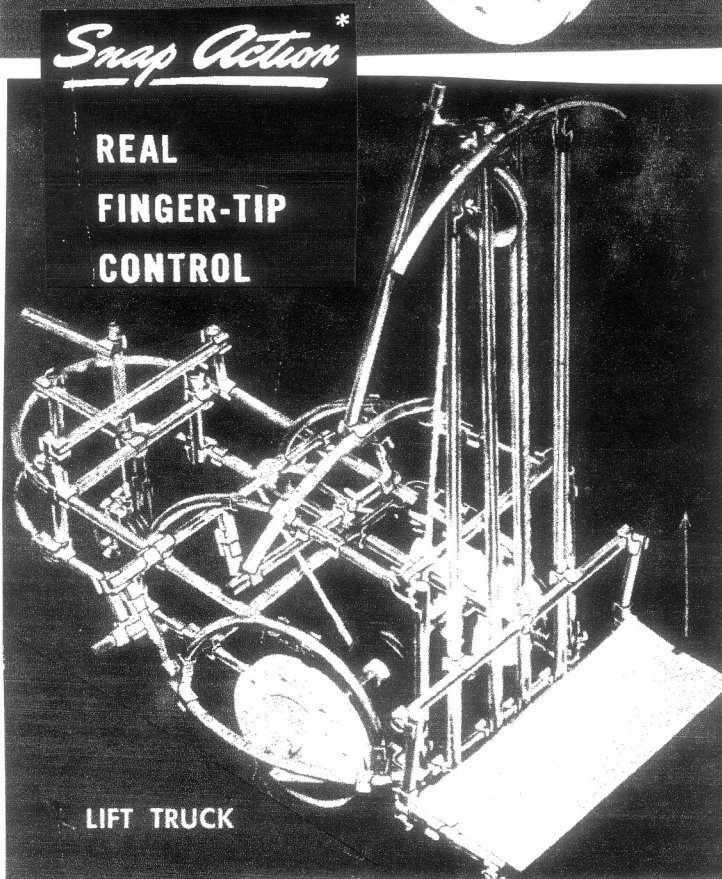
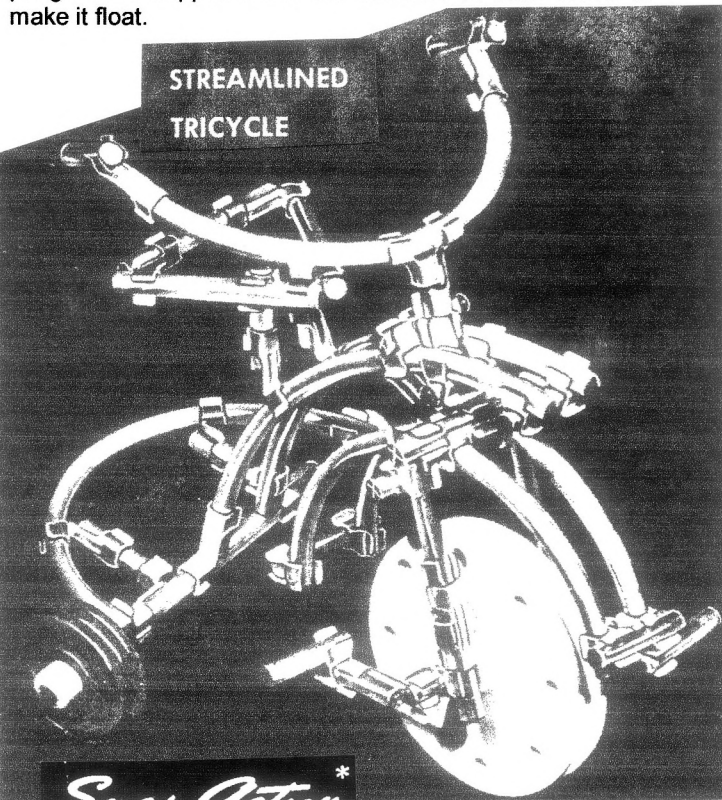
SUMMARY OF MANUAL •Name: Clip Craft CONSTRUCTION SET No.1. •Details of maker: Clip-Craft Corp., Empire State Bldg., N.Y.1, N.Y. Factory Yonkers 4, N.Y. •No dates/Ref Nos. •Page size: 201*258mm deep. •No. of pages: 16 unnumbered inc covers. •Language: English. •Printing: models are B&W photos on black ground; cover is red & black with B&W photo of boy with Jet Plane.



The two words before CONSTRUCTION on the cover are 'Snap Action', a slogan repeated several times in the Manual. The address on the back cover is

Clip-Craft Corp., Empire State Bldg., N.Y.1, N.Y. Factory Yonkers 4, N.Y., but the 'Empire State Bldg' has been (ineffectively) blacked out. Also on the back cover is 'Patent Pend.' but no date or number is given. Incidentally Clip-Craft always has a hyphen except in the stylised version above.

For each of the 28 models there is a large photo on a black ground, and the subjects vary from a Rocker to a Crane, and a See-Saw to a Helicopter A few like the Trike below look rather stylish. Where needed, as in the Lift Truck below, movement is cord operated from a built-up crank handle, except that in a couple of the models a right angle drive is achieved by using 2 Large Pulleys made into bevels by putting short Rods into the 8 outer holes. One model called a Float is original - it's a raft with a mast, and a ping-pong ball is trapped within the structure at each corner to make it float.



More on CLIP-CRAFT Some notes on a set & parts from this post-WW2 American Rod & Clip system were given in 21/594, but now more is to hand, particularly about the range of sets available. This account is based on two canister sets to hand, a Midget & a No.3; on information kindly sent by Kendrick Bisset, including details of an earlier No.1 outfit in a normal box; & on some Ebay material,

The SETS the **No.3** canister is shown right. The only indication that it is a 'No.3' is 'CLIP CRAFT CORP. / SET No.3 / MADE IN U.S.A. / YONKERS 4, N.Y.' impressed into the lid. It was wrongly described as a No.1 in OSN 21 because the lid of that set was missing and the manual with it had 'SET No.1' on its cover. The manual with this No.3 is identical and both have the 'Empire State Bldg.' address blacked out.

The **No.2**, seen on Ebay, has a canister that looks the same diameter as the No.3 but is about $\frac{3}{4}$ the height. The label design is the same except that it doesn't have the bottom ring of models. The lid is as the No.3 apart from the changed Set No. There is a large Model sheet with the Set and the models are printed white on black as in the 'No.1' manual.

The **Midget** canister is again the same diameter, but still shorter, 185mm high; the label is the same but this time without the bottom 2 rings of models on the No.3. The lid has 'MIDGET SET' instead of the Set No. The Clips are in a card box, 60mm Ø & 33mm deep, with the push-on bottom & lid red. The Model Sheet is 427*329mm and is printed black on white on one side only. The 8 models (plus Letters A, B, & C) are shown as line drawings, from ATOM GUN to MAN FROM MARS. Some are in the No.1 manual, some are simpler versions from it, and some are new models. A postal address is given: 630 Central Park Ave., Yonkers 4, New York. The set's name is not mentioned on the Sheet but Sets 2 & 3 are advertised, and Set 3 is said to have a 'beautiful instruction book containing 30 large models' – the 'No.1' manual has 28 models (and not all of them large).

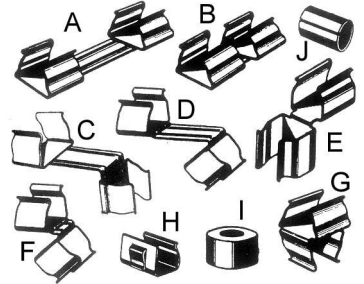
The **boxed No.1 Set** (13½*16¼*7⅞") is shown right (the set number is on the lid's side aprons). Details of the contents as found are given later but the main parts can be seen in the photo and their quantities are the same as in the No.3 canister set. The Set's manual is again the No.1, and its being with a No.1 set explains why it has No.1 on its cover! However in this case the Empire State Bldg. address has not been blacked out, and this is another reason why this Set is thought earlier than the No.3. It remains to be seen if there were any other boxed sets, the Tyres on the model Jeep shown in 14/390 are still unaccounted for.

Said Tyres are still on the same model in an Ebay item, a



trade ad said to be from 1949. It shows the 3 sizes of canister and while their names can't be read they look as if they could easily be Midget, No.2, & No.3. After them is what is clearly the No.1 boxed set, and again the words by it are unclear, but they could end in Set 1. If Set 1 was the name of the boxed set at this point it might explain why the smallest canister set was called Midget instead of No.1. It would still be strange though to have two sets, the boxed No.1 & the canister No.3, with much the same contents and the same manual.

Set Contents The parts found in 2 Midget sets, the No.3, & the boxed No.1, are listed below. A '+' means that there are 5 broken clips which could be any of type A, C, or D; an asterisk means one broken, which could be either E or F. Only 4 of the Small Pulleys are needed for the models on the Midget model sheet so it may be that the second Midget set contains parts from more than one outfit. For ease of reference the small parts, right, have been lettered.



Clip A: 2,2+;8;8. Clip B: 0,0;8;8. Clip C: 4,3+;8;13. Clip D: 8,0+;16;10. Clip E: 6,8*;12,18. Clip F: 0,3*;0;0. Clip G: 12,14;24;22. Clip H: 4,4;8,8. Rubber Axle Stop I: 7,9;10;6. Sleeve J: 0,0;8;9. Rod 24cm: 0,0;4;4. Rod 16cm: 2,2;4;4. Rod 12cm: 4,4;8;8. Rod 8cm: 6,8;8;8. Rod 4cm: 7,0;17;12. Rod 2cm: 9,10;21;17. Rod, ½-circle: 2,2;4;4. Rod, ¼-circle: 0,0;8;8. Pulley, Small: 3,6;4;4. Pulley, Large: 0,0;4;4. Sheet, 16*4cm: 2,4;4,4.

The PARTS Now some points not covered in OSN 21. The 'finger' on the **Clip H** is actually on the top, not at the side as shown. The **Sheet** is aluminium, 4*16cm, & .16mm (6



thou) thick. It could easily be cut to size with scissors and fits easily & firmly under the finger of Clip H, but kinks very easily even with careful use. The rolled **Sleeve** closes up to less than the diameter of a Rod when pushed into a Clip, as the free edges slide over one another. In most cases though a Clip by itself can act as an adequate bearing for a Rod to run in. The blue **Small Pulley** is 27mm Ø, about 9½mm thick, and is recessed on one side like the larger one. The **Axle Stop** is red rubber, 7mm Ø & 4mm long.

The MODELS The No.1 manual has a single photo of each model and in many of them it is not easy to see which parts, and particularly which Clips are needed. The line drawings on the Midget's Sheet are easier to follow and all the Rods in them are marked with their lengths. No doubt it was produced later than the No.1.

I made the No.1 manual Windmill shown at the bottom of

the previous page from with my No.3 set. It was reasonably easy to push the Rods into the Clips, and rather less easy to take them out, especially in the middle of a model. Suitable Clips could be bent when necessary to give a different angle but pliers were needed for this. The finished framework was quite rigid except for the single point attachment of the blade arms. But that was easy to improve with other parts from the Set, following a method used in another of the manual models. The built-up bevels worked well enough after careful adjustment and a cord drive from an extra Pulley near the base was possible, again from the parts in the Set (plus a few extra Clips).

As a rod system CLIP-CRAFT has the virtue of neat Clips which allow Rods to be set at angles to one another fairly easily. All but simple models though would be more difficult to make than with MECCANO style parts.

CLIP-CRAFT: S2

OSN 31/930

The SONNEBERGER PIONIER Sets The parts in most SON sets (East German, 1948 to after 1971, 4.2 & 5.4mm holes at 10mm pitch) are plain aluminium but coloured parts were noted at 15/418, & a set with certain coloured parts in it at 18/504.

The two **Pionier sets**, not referenced anywhere before as far as I know, have all the main parts in colour, anodised in blue, gold, & red (apart from MECCANO the only system I think to have this colour scheme). The basic set is No.I; the second, an add-on outfit, is No.II. This note is based on a near complete No.I. Both sets have a red box with almost all the top of the lid printed in colour as below, and this lid hasn't been seen on any other SON sets. The name PIONIER I is in the centre of the blue hexagon. The No.I box is 35*45*2cm and the parts are housed in a white moulded plastic tray, with a separate recess for practically every part.



The Set & the Parts The set isn't very large despite the size of the box, and it's a strange mix of parts with relatively few Strips, only 2 of which are longer than 8h - a 10h & a 14h. The No.II only adds another of each of those plus 2x 9h. On the other hand there are more A/Gs & small Plates than might be expected. A list of all the parts is given below (from the manual) with the quantities in Sets I/II in curly brackets, and a note where the actual content differs. Differences from the parts described in 18/504 are also mentioned.

• 2,3,4,5,7,8,9,10,14h **Strips** {2/0, 2/0, 2/2, 0/3, 6/5, 2/0, 0/2, 1/1, 1/1}. • 5,9,18h **A/Gs** {6/4, 4/2, 2/2}. But my No.I has 4x 18h & no 9h. • 1*2*1, 1*5*1 & 2*3*2 **DAS** {0/1, 2/0, 2/2}. The 2*3*2, not seen before has large holes either side of the bends. • A/B {8/3}. 2*1*2h **Double Bracket** {2/1}. 2*2h

Corner Bracket {1/0}. • **Trunnion** {2/0}. Missing from the Set but the later triangular pattern is shown in the manual models.

• **Flanged Plates**. 7*9h, 5*5h, 3*3h {1/0, 1/0, 2/1}. The 7*9h is a new part with large holes in its flanges. • **Perf. Plates**. 2*8h, 3*5h, 3*9h {4/2, 6/3, 2/1}. • **Flanged Disc** {1/0}. This part is 52mm Ø with a flat flange. • **30mm Pulley & Tyre** {4/2, 4/2}. The Tyre is black rubber & has no markings on its side walls. • **Gears**. 18t, 30mm Ø, & 35t, 56mm Ø {1/0, 1/0}. They are Mod 1.5. • **Collar** {5/2}. 6 were in the Set. **Hook** {1/0}. Flat, 24½mm long. • 70 & 110mm **Axles** {1/0, 2/1}; **Crank Handle** {1/0}. All are nicked steel with slightly rounded ends. 30 & 75mm plain steel **Screwed Rods** (2/2, 2/0). The 75mm were missing from the Set and there were 2x 70mm Axles. • **N&B**. Nicked steel and very similar to CONSTRUCTION parts. The pressed Nut is 7.0mm A/F, and the 7.0mm CH Bolt, 6mm u/h {80/40, 70/30}. The **Set Screw**, again nicked steel, has a 4.9mm CH & is 5mm u/h {20/8}. Only 12 were in the Set, one for each (s/t) boss & Collar. • The **Spanner**, nickel plated, is the later type (see MCS/FB), cranked at the ring end and 91mm long o/a {1/1}. The **Screwdriver** was missing but is shown in the manual as the wooden handled type in MCS/NZ {1/1}.

Colours. It is explained in the manual that all the round parts are anodised red, all the flat parts are yellow (actually a pleasant gold), and all the angled parts, the A/B for instance are blue. The colours are metallic except that some of the blue parts are almost matt & quite dark.

The Manual. It is the same size as the one described at 18/503 but is a completely new production for the Pionier sets, printed in full colour throughout, & none of the models have been carried over from any of the earlier known manuals.

SONNEBERGER is on the first page but not on the cover (right). Of the 12 models in it only two can be made with Set I. They are a Pair of Scales & an Electric Cart, fair



small models but not very exciting, especially given the size of the box, and neither of them do justice to the Set. All the other