

better view of the Pulley. The box is said to be 22½\*15cm and by scaling the hole pitch is perhaps a little greater than ½”.

The 11h Strips are below the Pulleys in the top compartment. It is clear in other views that, as on the lid, the Plate is flanged on its long edges. 2 Axles with a scaled length of 5.2h could be seen in the other box. The Flanged Plate is obviously green and many of the other parts have a greenish look too, even the 11h Strips in the other box. It may not be clear in the photo that the Nuts are hexagonal & the Bolts roundheaded. The brass Collar to the right of the N&B looks as if it should be keeping more august company.

The outfits' date was given as possibly the 1960s and I'd have thought it might be earlier than that.

**MILO: S1** [33/973]

7. **Snippet – An INVENTOR Set** The name INVENTOR was mentioned in 11/291 but without any details. It's not sure if that INVENTOR is actually the one below (the name can just be



seen on the top of the manual). I came across it on a Czech web site ([www.e-hracky.cz/zpravy/merkur.htm](http://www.e-hracky.cz/zpravy/merkur.htm)) in a piece, all in Czech, about the history of MERKUR. The name Jaroslav Vancl and the year 1920 are mentioned, and this ties in with the history of MERKUR given on the Merkur web page ([www.merkurtoys.cz](http://www.merkurtoys.cz)). Vancl was the man who in 1920 founded the company which ultimately made MERKUR, but the first set was INVENTOR and the parts were, to quote the English version of the History, 'connected with metal hooks similar to nowadays used (for) scaffolding 'Haki' (the name of a scaffolding firm)'. One might think that the structural parts in such a system would be rods or tubes rather than the slotted parts in the present Set. Perhaps the Czech version of the history, or the e-hracky page would be more helpful, if any reader can understand Czech. To complete the story a change to 3.5mm N&B was made in 1925 and presumably that was when the MERKUR name and parts were introduced, but it's not quite clear that the two changes coincided.

Going back to the Set, the main parts seem to be what look like Angle (or perhaps Channel) Girders, Strips, & DAS. Otherwise just the Spoked Wheels, and inset bottom right is a close-up of them in which the spokes can just about be seen.

**INVENTOR: S1** [33/973]

8. **SNIPPET: A COMBINED Solar Set** Judging from the general appearance of the lid below, the boy on it top left (see



30/887), and the rather peculiar slogans on it, particularly the one after SOLAR POWERED (BAND YOUR EYES ON THE FUNNY TOYS!), another offering from Polylong. I've only seen it once, on the German Ebay in August. It has 172 parts to presumably make either of the models on the lid. The cylindrical Motor can just be seen under the nearest seat of the Roundabout, with a red Pinion on it driving the large red Gear – the latter probably spoked like those in the Windmill. Quite a nice little set really.

**POLYLONG: S4** [33/973]

9. **SNIPPET: THE THATCHER TIN CAN TOY** MAKES TOYS FROM TIN CANS. (The ultimate DIY outfit?) This 1919 Gilbert



set was probably inspired by a book, Making Tin Can Toys, written by Edward & Isobel Thatcher, and published in 1919 by J.B.Lippincott Co. of Philadelphia & London. It is said to have been intended to provide occupational therapy for injured military personnel. The Ebay item was an empty, hinged, wooden box, plain on the outside but with the label above inside the lid. No clues as to its contents but some quite ambitious looking models on the label.

**GILBERT THATCHER TIN CAN TOY: S1** [33/973]

**OSN Subscription Rates** The price per Issue, including postage, at Printed Paper Rate where available, is £5.50 for UK; £6.50 by air to Europe & surface anywhere; £7.50 by air outside Europe. **Back Issues** For the zones above : OSN 1: £1/£1.30/£1.50; OSN 2,3: £2.30/£2.70/ £2.90 each; OSN 4-27: £3.60/£4.10/£4.50 each; OSN 28 on (in colour): £6/£7/£8. (All colour & some B&W issues are on loose sheets.) **Payments** Please make cheques etc payable to P.A.Knowles. Remittances must be in Pounds Sterling (GBP) or, as cash, in Euros or US Dollars (at £1=€1.50= \$1.80). Payments from overseas may also be made using PayPal. **Small Ads** Short ads are free to subscribers; insertion guaranteed in OSN 34 if received by the end of January (but repeats may not always be possible, please ask).

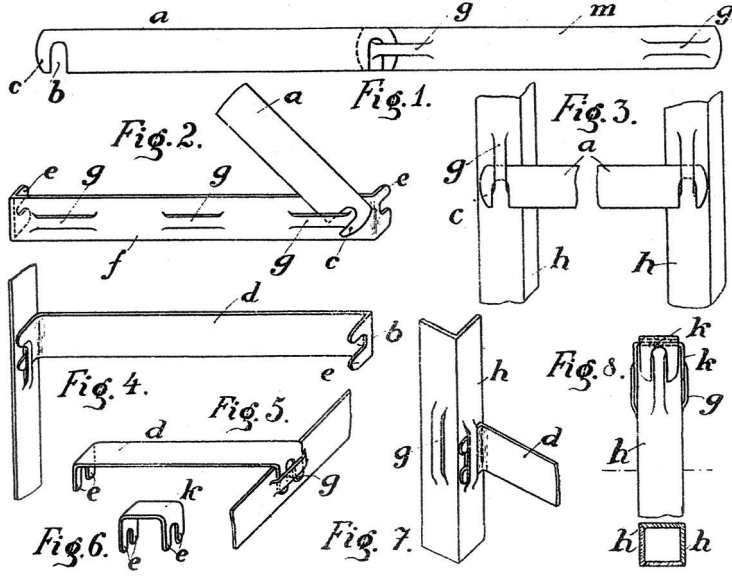
**OSN – Your Credit Balance:**

was after OSN 32  
was after your remittance of

is after this Issue

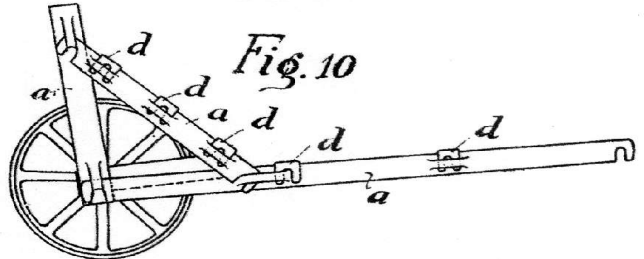
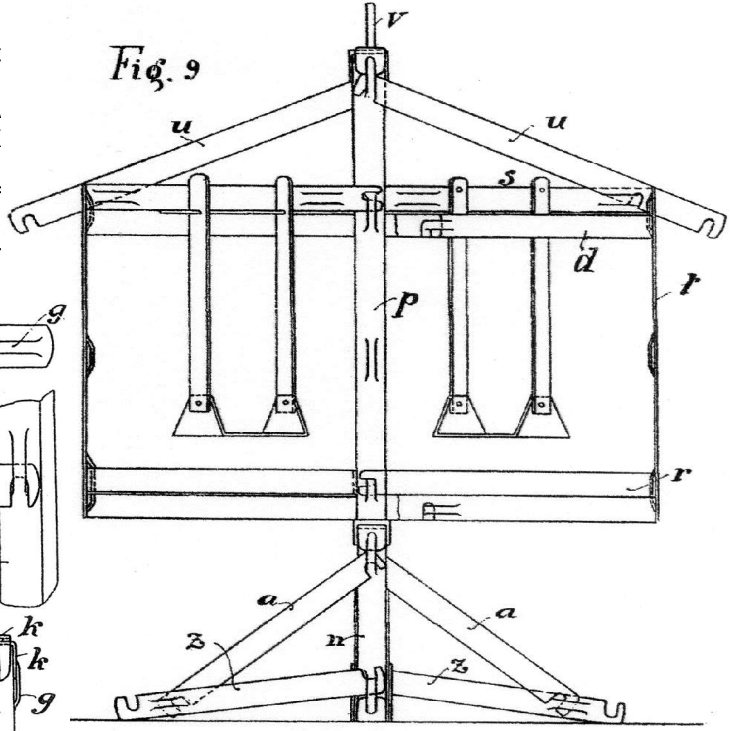
Please send at least £ if you wish to receive the next Issue.

**Czech INVENTOR** Following the brief note about this early system in 33/973 David Hobson kindly sent the relevant UK patent. It is No.150719, application date Sept.1, 1920, and the original Czech version dates from Sept. 9, 1919. A French patent is also known, dated 30 August, 1920. The UK patent is in the name of Jaroslav Vand of Policenad, Metuji, on his own behalf, and as assignee of Antonin Konig of Ledhuj, near Policenad. Vancl it will be recalled was the founder of the company which made INVENTOR, and later MERKUR, and the factory is still at Policenad.



Above & right are most of the illustrations in the patent. Fig.1 shows the basic principle with part 'a' having a slot, called a hook, at each end, and part 'm' with a pressed through 'eye' at each end. Both parts can have a series of eyes along their its length. As can be seen 'a' & 'm' are joined by pushing a hook into an eye, at an angle if so desired, as in Fig.2, or at 90° as in Fig.3. Figs.4, 5, & 7 show how a DAS with hooked ends can be used (the eye is specified as being just long enough to take the width of a strip). Fig.8 shows a square tube made by joining 2 angles 'h' with a double bracket (Fig.6) at each end.

The base of the roundabout in Fig.9 has a square tube 'n' supported by struts 'a' & 'z', and supporting a vertical rod 'v' (the double bracket must have a hole in its base). The rotating part again has a central square tube 'p' and it supports 2 rings



'r' & 's' made of suitably curved strips. They are spaced vertically by strips 't' and joined to the tube by DAS 'd' & strips 'u'. The swings are then, it is said, hooked into the ring 's' by wires.

The framework of the 'wheelbarrow' in Fig.10 is straightforward but how the wheel is mounted isn't explained.

Going back to the photo in OSN 33, what were taken to be slots would be the eyes, and hooks can be seen at the ends of the appropriate parts in the illustrated parts on the lid, and on some of the parts in the box.

OSN 34/1015

INVENTOR: S2

**SNIPPET: A LAVAZZA Promotional Outfit from BRAL** Lavazza is a well-known brand of coffee in Italy. Right the top & underside of the box, and below the parts in it. The latter, apart from any Tools that were included, look to be complete, with 2 spare N&B (I suppose the tip of the Trunnion pushes into the end of the formed Plate to stop it turning). The parts match the illustrations except that the Flexible Plate is black. The wheels are Pulleys and they presumably push onto the Axles. The metal parts look to have the usual Bral nickel finish except for the BZP N&B. The Nuts are hexagonal rather than the square type seen in other BRAL sets, so perhaps the Set is a fairly recent introduction.



is called 'triculo' and the model is a small Tricycle made of 4 Strips, a Trunnion, and the same black Pulleys as wheels.

OSN 34/1015

BRAL: S2

**INVENTOR**

by Jacques Pitrat

Inventor was a Czech system, invented c.1920 by Jazroslav Vincl, who later created MERKUR. A snippet was published in OSN 33/973, and the patent described in 34/1015. The system includes Sets 1, 2, and 3, this account is based on a No.3.

Most of the parts have hooked ends, and many of them have pressed through eyes along their length. Parts are joined by hooking the hooked end of one part over the end of one of the pressed through eyes in another part, at the angle desired. The various possibilities are shown in the patent.

**The SETS** As mentioned above there were 3 main sets: the manual implies that it is possible to upgrade a set to the next one, but it does not specify whether it is with a supplementary set, or by buying the missing parts. The contents of Sets 1-3 are given in Fig.3; 'kolečka' means wheel, 'hřidelky' rod, & 'matičky' nut. There are two anomalies in the contents. The 106mm Rod without Thread is only in Set No.1; however, it is possible to replace it with a 106mm Threaded Rod. And in fact for the two models where it would be used, the photo shows a threaded rod! Secondly, parts 4 & 4a are in the contents of the No.1, but are not in the No.2. This is a typo: they are in the list of parts for several models for Set 2.

**The No.3** is in a 458\*236\*20mm cardboard box (Figs.1 & 2). On the lid a boy builds a model, and attracts the admiring glances of his sister; several other models appear in the landscape. An enlargement of the photo of the parts in the manual (Fig.4) is glued inside the lid.

The 59 different parts in the No.3 are shown in Fig.9. This is about 15 more than mentioned in the manual (Figs.3 & 4) because they do not include all the variations of the parts found in the No.3 (as described below). And there is actually only one type of Wheel despite two being shown in Fig.4.

**The PARTS** The steel parts are nickel plated and although they are nearly a hundred years old, they are in a good condition: only a few of them have small spots of rust. Most are Strips, A/Gs, & DAS; some are flat, while others have a sequence of 1 to 11 eyes. Some have a hook at each end; some at only one end; some no hook at all. There are two kinds of hook: they are shown in Fig.9a, one is like a 'U', the other likewise but with a round hole at the U's base. I'll call them 'U' & 'R'. A Rod can be put through the hole in the R hook: in Fig.6, the four Strips that support the Rod have an R hook. This use of the parts isn't explained in the manual or in the patent. The larger sets contain three Nuts (there are no bolts) and they are used on the threaded ends of the Rods. The allows for instance, a propeller or a windmill sail to be mounted (Fig.8), but the threaded ends of the Rods are mainly used to carry the Wheels, whose bores are also threaded.

The Rods are 4.0mm Ø with 4.0mm o.d. threads; the



**Fig.1**



**Fig.2**

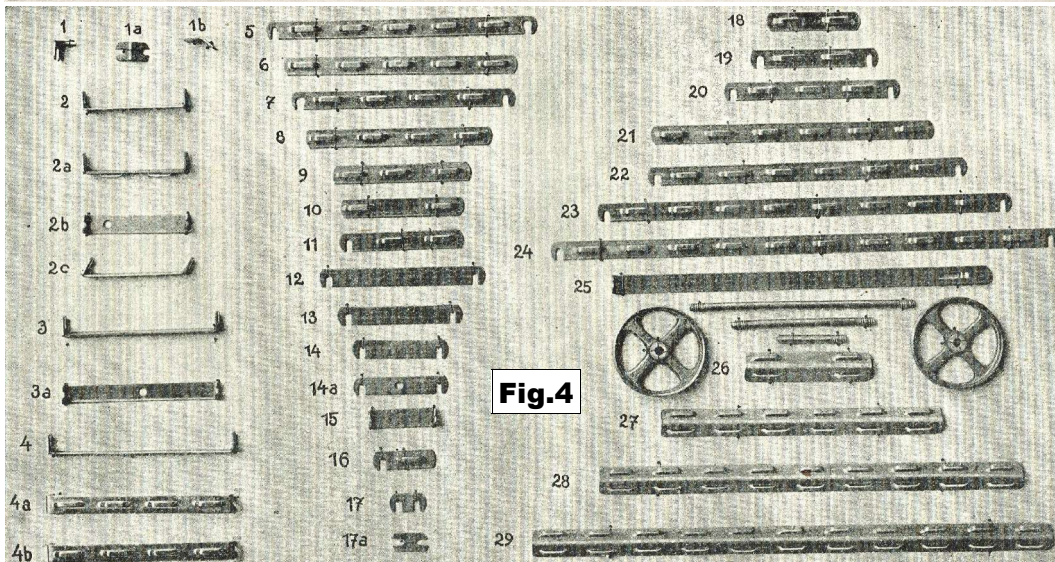
Wheel is 40mm diameter and has no pulley groove.

In the notes on the parts which follow comparisons will be made between some of the actual parts and those mentioned in the manual. To make this easier the PNs in Figs.3 & 4 have been added in red to the equivalent parts in Fig.9, and where variant parts exist they have been added under the same PN.

Where parts have a hook at each end they are in most

Číslo	Množství kusů v. číslo	Množství kusů v. číslo			Číslo	Množství kusů v. číslo			
		1	2	3			1	2	3
1a	úhel pravý — 2 kusy s dírkou . . . . .	6	8	18	23	pásky s osmi očky a 2 háčky délka 200 mm	—	8	12
1b	úhel šestihran . . . . .	—	—	8	24	pásky s deseti očky a 2 háčky dél. 246 mm	—	2	8
2	úhel osmihran . . . . .	—	—	20	25	oj délka 200 mm	—	1	1
2a	pásky s úhlem délka 50 mm s 2 očky . . . . .	10	16	16	25	pravý úhel se 4 očky délka 60 mm . . . . .	4	4	4
2b	pásky s úhlem délka 50 mm s 2 očky . . . . .	2	2	6	27	pravý úhel se 12 očky délka 136 mm . . . . .	—	4	4
2c	pásky s úhlem délka 50 mm s 2 očky . . . . .	—	2	2	28	pravý úhel s 18 očky délka 204 mm . . . . .	—	2	4
3	pásky s úhlem délka 75 mm . . . . .	8	12	14	29	pravý úhel s 22 očky délka 251 mm . . . . .	—	—	4
3a	pásky s úhlem délka 75 mm ve středu dířka . . . . .	—	2	2		kolečka . . . . .	2	4	4
4	pásky s úhlem délka 90 mm . . . . .	2	—	19		hřidelky bez závitů délka 106 mm . . . . .	1	—	—
4a	pásky s.4 očky délka 90 mm . . . . .	2	—	1		hřidelky se závitěm délka 106 mm . . . . .	—	2	3
4b	pásky s.4 očky v háčku s dírkou délka 90 mm . . . . .	—	—	4		hřidelky se závitěm délka 82 mm . . . . .	—	—	2
5	pásky 5 oček a háčky délka 131 mm . . . . .	4	14	16		hřidelky se závitěm délka 70 mm . . . . .	1	2	2
6	pásky 5 oček délka 113 mm . . . . .	2	2	8		hřidelky se závitěm délka 30 mm . . . . .	—	—	1
7	pásky 4 očka a háčky délka 108 mm . . . . .	4	8	14		matičky se závitěm . . . . .	—	3	3
8	pásky 4 očka délka 90 mm . . . . .	4	4	12					
9	pásky 3 očka délka 67 mm . . . . .	4	4	12					
10	pásky 2 očka délka 60 mm . . . . .	4	4	4					
11	pásky 2 očka, pravý neb levý háč, dél. 60 mm . . . . .	2	4	12					
12	pásky oboustranné háčky délka 80 mm . . . . .	2	6	30					
13	pásky oboustranné háčky délka 60 mm . . . . .	4	4	12					
14	pásky oboustranné háčky délka 46 mm . . . . .	4	8	30					
14a	pásky oboustr.háč.ve středu díř. dél. 46 mm . . . . .	—	—	2					
15	pásky s úhlem délka 32 mm . . . . .	—	—	16					
16	háček a očko délka 30 mm . . . . .	—	—	4					
17	háčky na obou stranách délka 18 mm . . . . .	—	—	8					
17a	háčky na obou stranách délka 18 mm . . . . .	—	—	10					
18	pásky se dvěma očky délka 44 mm . . . . .	—	1	4					
19	pásky se dvěma očky a háčky délka 62 mm . . . . .	—	6	10					
20	pásky se třemi očky a háčky délka 85 mm . . . . .	—	6	10					
21	pásky se šesti očky délka 136 mm . . . . .	—	4	7					
22	pásky se šesti očky a 2 háčky dél. 154 mm . . . . .	—	6	12					

**Fig.3**



**Fig.4**

cases the same type. There are only two exceptions: in Fig.4, parts 5 and 7 are U at one end and R at the other one. In the actual parts, Fig.9, the two 5's have either U or R at both ends.

In the list of parts (Fig.3), DAS 4a has U, while 4b has R, at both ends. Thus, it is possible to have a Rod parallel to the Strip, which is useful for a spring or a door.

Many parts (1, 5, 7, 11, 23) have two variants: all the hooks are U, or all are R.

There are other kinds of variants: parts 2b, 3a, and 14a have a hole and are variants of other parts without a hole. Also in Fig.9 part 24 has a variant with a hole in the middle,



Fig.6 Dvoukolka.

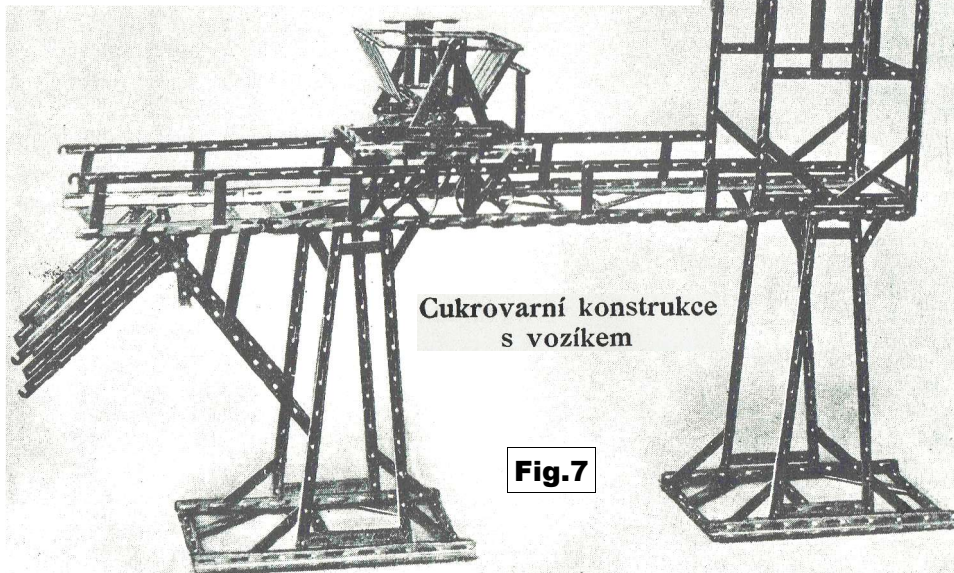


Fig.7

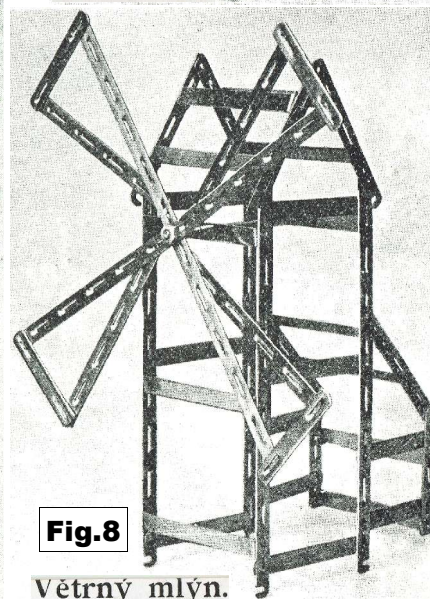


Fig.8

Větrný mlýn.

right, exists in this form: there are 12 with U at both ends, and 4 with R at both ends!

and this appears in neither Fig.3, nor in Fig.4.

Furthermore, some parts with eyes are handed because they have one U end and one R end (part 7), or because they have only one hook (parts 11 & 16). Other variants, which also have one U end and one R end (12, 13, 14), are not handed because they are flat.

When a part has several variants not mentioned in the contents, the sum of all the parts present in the box is equal to its number in Fig.3: there are 16 angle brackets with two U, and 2 with two R, the contents indicate 18 parts 1. For some parts, this is more complicated; let us consider part 7, 14 of them are in set No.3. 5 are R at both ends, 5 are U at both ends, 2 are R on the left and U on the right, and 2 are U on the left and R on the right. Surprisingly enough, none of the 16 parts 5, represented on Fig.5 with U on the left and R on the

**The MANUAL** The 241\*144mm manual (Fig.5) has 36 pages plus covers. It is written in Czech, but the language appears only in the introduction (written by Jaroslav Vancl), the content of the sets, the name of the models, and the list of parts needed for building them. Nowhere is the way to use parts described, this essential information is only in the patent (OSN 34/105). For the models there are no building instructions, only photos, which are not very clear. 23 models are shown for set No.1, 11 for Set 2, and 13 for Set 3. Examples are shown in Figs.6, 8, & 7 for Sets 1, 2, 3. Some models for Set 3 also have photos of substructures: with Fig.7, two more pages include the photos of three substructures. Many models are rather disappointing: they do not use all the potential of the set. However, in Fig.7 the model uses 245 of the 375 parts in set No.3.

**END WORD** This system deserves all the more credit in

that it is very original. It is well suited for building static models, although it lacks Plates. However, it has a great weakness: it is the only system I know where 30% of the parts are omitted completely from its description!

It will not be easy to build models: the photos of the manual are not clear, and the choices between the different variants of a part are not indicated.

It is not surprising that its inventor later chose to develop MERKUR, a MECCANO-like system.

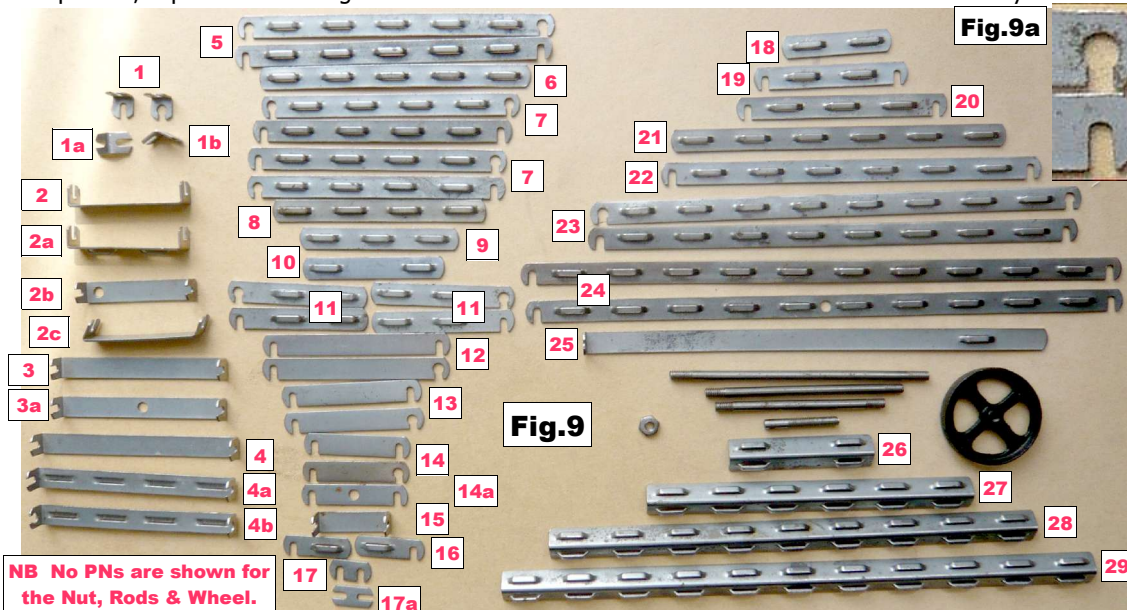


Fig.9

Fig.9a

NB No PNs are shown for the Nut, Rods & Wheel.