

FINNEY AND SMITH

PROPRIETORS - DAVE FINNEY, NICK SMITH & MIKE CORP

21 BELLOTT DRIVE, CORSHAM, WILTSHIRE, SN13 9UQ - TEL: 01249 714085

3mm SCALE ETCHED BRASS AND NICKEL SILVER LOCOMOTIVE KIT WITH WHITEMETAL FITTINGS

LNER J69/1 (ex GES56) 0-6-0T

Parts to complete:

Bearings
Couplings
Gears
Handrail knobs
Motor
Paint

Pickups
Transfers
Wheels (see
instructions)
Wire (see instructions)



Kit by arrangement with Jim McGeown Connoisseur Models

HISTORICAL INFORMATION

S56 covered the last 20 of the Buckjumpers with wider cab and tanks built in 1904.

The story of classes J67, J68, and J69 is complicated involving 190 locomotives. First on the scene were GER class R24 in 1890. eventually 140 of these were built (all with 160 lb. psi boilers (interchangeable with J65), stovepipe chimneys, 2 column Ramsbottom safety valves, low cab roofs and round spectacles) of which 100 were passenger locomotives, Westinghouse braked, screw reverse, and steel wheels with 10 spokes. The other 40 were freight locomotives with steam brake, lever reverse and iron wheels with 15 spokes and this group form the basis of J67/1 [low pressure, small tank]. From 1902 to 1921, 95 of the passenger variant were rebuilt to class R24R with wider tanks but retaining the original cabs, a longer firebox, 4 column Ramsbottom safety valves, and a higher boiler pressure (180 lb. psi). These form the basis of J69/1 [high pressure, large tank]. From 1904, 20 of the S56 were built with wide cabs to match the large tanks, long firebox, 180 lb. psi boiler, Westinghouse braked, screw reverse, and steel wheels with 10 spokes. These were included in J69/1. Next on the scene from 1912 were ten C72 Westinghouse braked, with screw reverse, and steel wheels with 10 spokes, long firebox, 180 lb. psi boiler, high roof cab with side windows, parallel sided chimney with rim. These form the basis of J68 [high pressure, large tank, side window cab]. These were followed by a further twenty of C72 as freight locomotives with steam brake, lever reverse and iron wheels with 15 spokes, long firebox, 180 lb. psi boiler, high roof cab with side windows, parallel sided cast chimney with rim.

The first ten of C72 took the passenger fittings and wheels from the first ten R24 which now became freight locomotives. 2 were in original state but 8 already had wider tanks. Three passenger engines with narrow tanks thus remained in J67. The LNER fitted 160 lb. psi boilers to some of R24R to make J67/2 [low pressure, large tank]. J68 7047 was included in this downgrade from 1939-1945 and then reverted to J68. 59 passenger locomotives were converted to shunters, mostly vacuum fitted. Some narrow tank R24 were fitted with high pressure boilers from 1946 to become J69/2 [high pressure, small tank]. 13 J69 and a J68 were withdrawn in 1940 and sold to the government. Some of J67 actually had long firebox high pressure boilers down rated but neither of the low pressure S56 (7082 from 1938, 7086 from 1940-1944). There is a Lyn Brooks drawing, L80135, of the earlier locomotives in GER Journal special No. 3 of 1981. This drawing also appears in a two part Ian Rice article in MRJ numbers 35 and 36. Many locomotives had their GER buffers replaced by LNER group standard buffers, mostly after 1944. A single toolbox was initially carried on the left

hand tank by the spectacle removed at overhaul from 1944 but some lost them earlier. Smokebox doors as fitted were flush, plain, dished replaced from 1915 by one with a bevelled edge and surrounding ring. Passenger engines had brackets for destination boards on smokebox and bunker. Smokebox handrails were initially separate on early locomotives but replaced by one continuous with the boiler handrails as on later engines including all S56. Some J67 retained separate handrails. The LNER replaced the Ramsbottom safety valves with twin Ross Pops. Some were mounted on the Ramsbottom seating and some on the firebox top. Some Ross pops had casings to keep steam away from the spectacles. The whistle was relocated to a pipe by the spectacles. From 1930, the Stovepipes were replaced by cast chimneys with rims which were 2½" shorter. 2 different heights of cast chimney were to be used but the extra short one was rare and probably originated at Gorton. From 1933, the wooden cab roofs were replaced with higher metal ones with a roof ventilator. Most engines transferred to Scotland acquired shunters footsteps below the bunker sides. They also tended to retain the original cabs, but RCTS says Stratford rectified this when engines were transferred south. At least one of the S56 pair retained stovepipe and low cab. Some Scottish engines acquired crude stovepipe chimneys during the war. Some engines had the Westinghouse pump moved from left of locomotive to the right. Some locomotives ran in GER grey with LNER numbers with large GER 19" yellow numerals until about 1930. Until the first world war, Westinghouse fitted tanks were blue. Passenger locomotives were fitted with condensing gear from 1894, or from new if built later. Steam heating was added to many from 1924. Two extra coal rails were added between the three fitted by the GER between 1926 and 1930. Engines transferred to Scotland lost the extra two rails and had the original three plated instead. Locomotives fitted with steam brakes in 1927/8 had lever reverse fitted at the same time, and may have had wheels changed. If the wheels changed, they could be changed to 12 or 15 spoke unbalanced. These conversions to shunters usually lost the destination board brackets from smokebox and bunker, but not always. Many Westinghouse braked locomotives were fitted with lever reverse later for carriage shunting.

Number 87 from the S56 class is in the York NRM. GER numbers were 51-60 and 81-90, LNER 7051-7060 and 7081-7090. The 1946 numbers were 8617-8638 less 8620, 8622, 8624, 8627, 8634 as the locomotives that should have had these numbers had been sold to the Government War Department. There is a drawing and article in Model Railways March 1972.

Individual S56 histories:

Locomotive 51, built May 1904, Renumbered 7051 in 1924, Renumbered 8617 December 1946, Renumbered 68617 December 1949, Condensing

gear removed and Westinghouse brake removed and steam brake fitted December 1927. Locomotives fitted with steam brakes in 1927/8 had lever reverse fitted at the same time, and may have had wheels changed. If the wheels changed, they could be changed to 12 or 15 spoke unbalanced. These conversions to shunters usually lost the destination board brackets from smokebox and bunker, but not always. Vacuum fitted May 1940. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Stratford. Withdrawn July 1958.

Locomotive 52, built May 1904, Renumbered 7052 in 1924, Renumbered 8618 September 1946, Renumbered 68618 November 1948, Condensing gear removed and Westinghouse brake removed and steam brake fitted December 1927. Locomotives fitted with steam brakes in 1927/8 had lever reverse fitted at the same time, and may have had wheels changed. If the wheels changed, they could be changed to 12 or 15 spoke unbalanced. These conversions to shunters usually lost the destination board brackets from smokebox and bunker, but not always. Not Vacuum fitted. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Lincoln. Withdrawn August 1958.

Locomotive 53, built May 1904, Renumbered 7053 in 1924, Renumbered 8619 January 1947, Renumbered E8619 January 1948 and painted LNER green, Renumbered 68619 June 1953, Condensing gear removed and Vacuum fitted January 1935, Condensing gear refitted August 1940, Trip cock for East London line trainstops fitted by 1948. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Stratford. Withdrawn October 1961. Fig 99 of RCTS 8A shows her at North Woolwich in April 1951 numbered E8619 on LNER green with BRITISH RAILWAYS in full, GER buffers, tall cast chimney, raised cab, exposed safety valves, dual braked and steam heating pipes. Fig 100 shows her as 68619 at Liverpool Street in lined black, post 1956 emblem as the 'East Side Pilot. Fig 101 shows her at the same place in October 1959 in GER blue. There is a photo on p77 of 'The Tollesbury Branch' taken in the early 1930s showing 7053 with a low cab roof and cast chimney. GER Journal 65 has a cover photo credited to the Gresley society showing the top of her tanks taken at Liverpool Street during her blue period. Three Colour photo in Colour of steam volume 9, the Great Eastern Line shows her at Liverpool Street in lined black with pre 1956 emblem, and in blue. She was unlined black with a pre 1956 emblem like the rest of the class when she first lost her green paint.

Locomotive 54, built May 1904, Renumbered 7054 in 1924, Withdrawn October 1940 and sold to WD, Condensing gear removed September 1930, Vacuum fitted May 1924 and removed October 1939. In January 1922, she was allocated to Wood Street. Numbered 86 and then 70086 by WD, sold to

Metal Industries at Faslane in 1946 numbered MIL 1, and scrapped June 1954. Fig 92 of RCTS 8A shows her at Parkeston in 1936 with raised cab, tall cast chimney, exposed safety valves, 10 spoke balanced wheels, and group standard buffers. She went to Longmoor Military Railway in October 1939 and Faslane in 1942. Photo in GER Journal 77 shows her at Longmoor as 7054 but with no ownership markings, probably in 1942. Safety valves shrouded, group standard buffers, cast chimney, raised cab roof, and 10 spoke balanced wheels.

Locomotive 55, built May 1904, Renumbered 7055 in 1924, Renumbered 8621 January 1947, Renumbered 68621 October 1948, Condensing gear removed before grouping. Westinghouse brake removed and steam brake fitted April 1933, Vacuum fitted August 1937. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Stratford. Withdrawn September 1962.

Locomotive 56, built June 1904, Renumbered 7056 in 1924, Withdrawn October 1940 and sold to WD, Condensing gear removed before grouping, Not Vacuum fitted. In January 1922, she was allocated to Stratford. Numbered 87 and then 70087 by WD, sold to Metal Industries at Faslane in 1946 numbered MIL 2, and scrapped June 1954. She went to Longmoor Military Railway in October 1939 and Faslane in 1942. Photo in GER Journal 77 shows her bunker at Liss on the Longmoor Military Railway, probably in 1942, fitted with destination brackets and group standard buffers.

Locomotive 57, built June 1904, Renumbered 7057 in 1924, Renumbered 8623 July 1946, Renumbered 68623 April 1951, Condensing gear removed and Westinghouse brake removed and steam brake fitted October 1928. Locomotives fitted with steam brakes in 1927/8 had lever reverse fitted at the same time, and may have had wheels changed. If the wheels changed, they could be changed to 12 or 15 spoke unbalanced and photograph suggests this one got 12 spoke wheels. These conversions to shunters usually lost the destination board brackets from smokebox and bunker, but not always. In January 1922, she was allocated to Stratford. Went to Scotland in 1927/8 [which probably resulted in retaining low cab, acquiring shunters steps, plating of original 3 coal rails and loss of infil rails, casing round safety valves], Not Vacuum fitted. In January and December 1947, she was allocated to St Margarets. Came south in 1951/2 and may have been fitted with cast chimney but retained low roof. Withdrawn February 1961. Fig 93 of RCTS 8A shows her at South Leith in 1947 with low cab roof, stovepipe chimney, 12 spoke wheels, shunters step under bunker and handrail on bunker side, casing round safety valves, whistle on pipe by spectacles.

Locomotive 58, built June 1904, Renumbered 7058 in 1924, Withdrawn October 1940 and sold to WD, Condensing gear removed November 1936, Vacuum fitted November 1936 and removed April 1940. In January 1922, she was allocated to Stratford. Numbered 83 and then 70083 by WD, sold to Metal Industries at Faslane in 1946 numbered MIL 4, and scrapped June 1954. In April 1940 she was moved from Stratford to Melbourne Military Railway in Derbyshire. In July 1941 she moved to Cairnryan (Stranraer) and in March 1942 to Faslane.

Locomotive 59, built June 1904, Renumbered 7059 in 1924, Renumbered 8625 September 1946, Renumbered 68625 February 1950, Condensing gear removed between grouping and 1948, Vacuum fitted August 1932. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Yarmouth South Town. Withdrawn January 1959.

Locomotive 60, built June 1904, Renumbered 7060 in 1924, Renumbered 8626 October 1946, Renumbered 68626 January 1950, Condensing gear removed and Westinghouse brake removed and steam brake fitted December 1927. Locomotives fitted with steam brakes in 1927/8 had lever reverse fitted at the same time, and may have had wheels changed. If the wheels changed, and photograph suggests this one did not, they could be changed to 12 or 15 spoke unbalanced. These conversions to shunters usually lost the destination board brackets from smokebox and bunker, but not always. Vacuum fitted June 1940. In January 1922, she was allocated to Wood Street. In January and December 1947, she was allocated to Stratford. Withdrawn May 1962. Fig 97 of RCTS 8A shows her at Grantham in July 1958 with high cab roof, short cast chimney, group standard buffers, 10 spoke balanced wheels, exposed safety valves. Photo in GER loco Sheds Volume 1 shows her with post 1956 BR emblem and smokebox destination brackets.

Locomotive 81, built August 1904, Renumbered 7081 in 1924, Withdrawn October 1940 and sold to WD, Condensing gear removed December 1936, Vacuum fitted December 1933 and removed May 1940. In January 1922, she was allocated to Stratford. Numbered 80 and then 70080 (but on paper) by WD, sold to John Lysaght at Scunthorpe in February 1948 numbered 25, and scrapped 1958/9. In April 1940 she was moved from Colchester to Melbourne Military Railway in Derbyshire. In 1941 she moved to Cairnryan (Stranraer) and in 1944 she moved to Southampton to help in D day preparations. Eastleigh repaired her in May 1944 and gave her a new Westinghouse pump because they lacked bits for the 'old' GER pump.

Locomotive 82, built August 1904, Renumbered 7082 in 1924, Renumbered 8628 September 1946, Renumbered 68628 September 1950, Condensing gear removed September 1935, Vacuum fitted September 1932, Short firebox low pressure boiler fitted August 1938. Fitted with a forward extension to the front footsteps. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Yarmouth Beach (or Vauxhall). Withdrawn February 1958. Photo in GER Journal 35 shows 8628 with cast chimney, raised cab roof, no toolbox, group standard buffers, and exposed safety valves.

Locomotive 83, built August 1904, Renumbered 7083 in 1924, Renumbered 8629 June 1946, Renumbered 68629 October 1949, Condensing gear retained, Trip cock for East London line trainstops fitted 1930/1, Vacuum fitted March 1929. In January 1922, she was allocated to Ongar. In January and December 1947, she was allocated to Colchester. Withdrawn November 1959. Photo on p71 of Steam at Stratford Shed 30A in September 1953 shows GER buffers, high cab roof, cast chimney, 10 spoke balanced wheels.

Locomotive 84, built August 1904, Renumbered 7084 in 1924, Renumbered 8630 January 1947, Renumbered 68630 July 1949, Condensing gear retained, Trip cock for East London line trainstops fitted 1930/1, Vacuum fitted November 1928. In January 1922, she was allocated to Enfield. In January and December 1947, she was allocated to Stratford. Withdrawn January 1959. Photo in Aspects of East Anglian Steam volume 1 at Liverpool Street in July 1954 as 68630 with GER buffers, tall cast chimney, dual fitted, raised cab roof, and exposed safety valves. Another photo in the same volume in September 1956 shows the steam heating pipe and the trip cock.

Locomotive 85, built August 1904, Renumbered 7085 in 1924, Renumbered 8631 January 1947, Renumbered 68631 November 1948, Condensing gear removed by grouping, refitted November 1923, Trip cock for East London line trainstops fitted 1930/1, Vacuum fitted November 1928. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Stratford. Withdrawn July 1958.

Locomotive 86, built September 1904, Renumbered 7086 in 1924, Renumbered 8632 September 1946, Renumbered 68632 July 1951, Condensing gear removed and Westinghouse brake removed and steam brake fitted December 1927. Locomotives fitted with steam brakes in 1927/8 had lever reverse fitted at the same time, and may have had wheels changed. If the wheels changed, they could be changed to 12 or 15 spoke unbalanced and photograph suggests this one got 15 spoke, unbalanced wheels. These conversions to shunters usually lost the destination board

brackets from smokebox and bunker, but not always. Short firebox low-pressure boiler fitted January 1940; high-pressure boiler refitted March 1944. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Peterborough New England. Withdrawn May 1958. Fig 98 of RCTS 8A shows her as 68632 with early BR emblem, GER buffers, exposed safety valves, raised cab, tall cast chimney, 15 spoke wheels, and rounded front corners to the side tank. No other locomotive had rounded tank fronts that she had acquired by 1944.

Locomotive 87, built September 1904, Renumbered 7087 in 1924, Renumbered 8633 April 1946, Renumbered 68633 January 1949, Condensing gear retained, Vacuum fitted October 1939. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Stratford. Withdrawn November 1960, Preserved at Clapham and then York. Photo in Aspects of East Anglian Steam volume 1 at Liverpool Street as 68633 shows raised cab, GER buffers, tall cast chimney, dual braked and steam heating pipe.

Locomotive 88, built September 1904, Renumbered 7088 in 1924, Withdrawn October 1940 and sold to WD, Condensing gear removed April 1934, Vacuum fitted November 1931 and removed October 1939. Numbered 91 and then 70091 by WD, sold to John Lysaght at Scunthorpe in February 1948 numbered 26, and scrapped October 1960. In January 1922, she was allocated to Stratford. She went to Longmoor Military Railway in October 1939, moving to Cairnryan (Stranraer) in 1942 before moving to Longtown and then to the Shropshire and Montgomery at Kinnerley.

Locomotive 89, built September 1904, Renumbered 7089 in 1924, Renumbered 8635 September 1946, Renumbered 68635 July 1948, Condensing gear removed April 1928, Vacuum fitted December 1925, Went to Scotland in 1928 which resulted in her retaining low cab, acquiring shunters steps, plating of original 3 coal rails and loss of infil rails, perhaps casing round safety valves and a different stovepipe but if so they reverted. In January 1922, she was allocated to Wood Street. Between May 1928 and August 1942, she was Perth Station pilot before moving to Dunfermline Upper. In January and December 1947, she was allocated to Dunfermline. Came south in June 1951 retained low roof and stovepipe. Withdrawn September 1962. Colour photo in Colour of steam volume 9, the Great Eastern Line shows her at New England in May 1958 as 68635 with low cab, stovepipe, exposed safety valves, GER buffers, Shunters step under bunker, 10 spoke balanced wheels, post 1956 BR emblem. Photograph as plate 58 in OPC 55 Years of East Anglian Steam at Parkeston in December 1961 shows low roof and 'dilapidated 3 piece stovepipe' and comments that she

moved to Stratford and received a replacement one piece rolled stovepipe before withdrawal.

Locomotive 90, built September 1904, Renumbered 7090 in 1924, Renumbered 8636 September 1946, Renumbered 68636 November 1950, Condensing gear removed March 1930, Vacuum fitted September 1924. In January 1922, she was allocated to Stratford. In January and December 1947, she was allocated to Colchester. Withdrawn January 1959. There are several photographs of 8636 in OPC 'The Tollesbury Branch' taken between 1946 and 1951 by various photographers. One by H. C. Casserley also appears on p64 in Bradford Barton 'LNER Steam'. They show dual fitted, steam heat pipes, destination brackets, exposed safety valves, GER buffers, raised cab roof, cast chimney. The book says that the practice of running Buckjumpers as 2-4-0T on this line ceased in the late 1920s.

REFERENCES - LOCOS OF THE LNER PART 8a

GER No	1946 No	Order	Built	Subsequent Conversions		Withdrawn
				J67/2	J69/	
51	8617	S56	1904	-	-	-
52	8618	S56	1904	-	-	-
53	8619	S56	1904	-	-	-
54	-	S56	1904	-	-	10/40
55	8621	S56	1904	-	-	-
56	-	S56	1904	-	-	10/40
57	8623	S56	1904	-	-	-
58	-	S56	1904	-	-	10/40
59	8625	S56	1904	-	-	-
60	8626	S56	1904	-	-	-
81	-	P57	1904	-	-	10/40
82	8628	P57	1904	8/38	-	-
83	8629	P57	1904	-	-	-
84	8230	P57	1904	-	-	-
85	8631	P57	1904	-	-	-
86	8632	P57	1904	2/40	2/45	-
87	8633	P57	1904	-	-	-
88	-	P57	1904	-	-	10/40
89	8635	P57	1904	-	-	-
90	8636	P57	1904	-	-	-

GENERAL INSTRUCTIONS.

Please read this section carefully especially if this is your first etched kit. Many modellers fall shy of working in this medium, but once a few simple skills are acquired you will find the sky's the limit.

First, you are employing many of the skills the scratch builder uses, with the exception that most of the fretting out of the parts is done for you but some cutting and trimming of parts will become necessary from time to time. Where this is the case we have tried to highlight this in the instructions.

We have been constructing etched Brass kits for a number of years, so here is a list of tips hopefully, of some use to the novice and expert alike.

To cut parts from fret use jeweller's snips [The Acme railcutter {with orange handles} is ideal] for the large parts and a Stanley Knife and a piece of softwood for the small detail parts. [Although Jim likes softwood for 0, with our thinner frets, I prefer to cut using a craft knife, just past its prime, onto something quite firm, either a melamine offcut or a sheet of aluminium]. Remove the tabs and burrs using a sharp Swiss file. Generally, it is better to leave bits on the fret, near their identification, until you are ready for them, but a pot to keep small bits in when the phone rings is useful.

You will need a soldering iron of at least 40 Watts for 0 gauge. A Weller 40 Watt is ideal, a 25 Watt iron is adequate for 3 mm; Weller and Antex both do something suitable. Some people prefer a Resistance Soldering Unit [RSU] such as the London Road Models version [from Fourtrack models], which can make overlays, and very small parts using minute amounts of solder, easier to apply. A supply of square cornered brass lumps to lean/balance parts against is useful with an RSU. Don't take the probe off the brass until your foot is off the pedal unless you want very 'distressed' models.

145 solder (such as Carrs) which melts at 145 degrees C, and Carrs Green label Flux [weak phosphoric acid] is adequate; some people distort the etch using higher melting temperature flux cored electrical solder whereas others get away with it. Solder paint may also be found useful, and come in a selection of melting points, use the higher temperature ones first so that small details can be added later using the lower temperatures. Do not worry if you make a mistake, Brass (and Nickel Silver) is very forgiving, just unsolder, clean off parts and try again. A desoldering tool is useful here, a spring loaded piston in a metal cylinder that sucks melted solder away from the iron [avoid the cheap rubber bulb variant]. Remember you are not soldering electrical joints, first you run flux with an old brush onto area to be soldered then carry some solder on the iron to joint. Do not dwell iron to long

on one spot otherwise the metal will distort, practise on some scrap first. A glass fibre brush available from draughtsman's shops or model suppliers should be used to burnish the metal along the joint and then with the aid of scrapers and sharp scalpel, remove solder afterwards. Beware that the brush sheds very irritating and invisible glass splinters, clean them away as you go and keep them away from your finger tips.

Strapping and small details are best applied using solder paint. This can avoid clogging up plank detail etc. with solder. Apply a thin coat of solder paint to the back of the component, [Sometimes it helps to tin it by melting the solder at this stage and adding a little more before fixing to the kit] place in position and hold in place with a thin knife point. Run a little liquid flux along edge of component, and then apply clean iron with excess solder removed from tip [That's what the damp sponge on your soldering iron stand is for], to the top of the component until molten solder (not just the flux) is seen bubbling (or just peeping) from the edges.

Folds in Brass are usually made with half etched lines on the inside. You will need bending bars for long folds, but a good 3" smooth jawed vice and a pair of blunt nosed pliers {smooth jaws, not serrated for better grip} should suffice for most models. Sometimes, the bend is easier to form after running a craft knife along the inside of the fold's half etch, but don't go through. You need to decide whether to form rivets before bending if they will become unreachable, or leave until later to avoid flattening them in the bending process. You will find it easier to solder if you burnish the Brass with a fibre brush and keep iron bit clean.

Where you need to fit layers of Brass together referred to as laminating in the main instructions i.e.: coupling rods, you may find it easier to align the parts together (a rod through the hole helps), then carefully clamp in the jaws of a vice. [This is where the RSU is easier, at least in 3 mm]. Run solder around edges, then file and clean up. Some holes in such components may have shrunk so far that you would prefer to reinforce them with small brass washers such as 12/14/16 BA from Suppliers such as Eileen's Emporium.

Other useful tools include a good pair of tweezers, a pin vice with a selection of drills from 0.3 mm to 2 mm, a small sharp screwdriver, some very fine pointed nosed pliers and some Broaches. The Broaches are used to open up holes. For larger holes for bearings, some people prefer a reamer, but a broach which will go a little over 1/8" (~3.2 mm) is OK. All rivets are either left proud on a half etch (requiring no more effort) or half etched on the rear waiting to be pushed out by you. A rivetting tool is useful for consistent rivets {commercially available from London Road Models [very simple], Dick Ganderton [more sophisticated] and George Watts (GW Models) [Rather

sophisticated, but could be useful if you want to do variants or things not available as kits}}, but some people manage with a blunt darning needle.

DO NOT rush the construction and clean up as you go. If you do not regularly wash your model the flux will soon turn everything Green, and if you try to glue any small parts they WON'T. In our kits all the White Metal castings can be glued if you desire. If using super glue use a good brand, and make sure surface to be glued is clean. It will help to polish castings with your glass fibre brush or an old suede brush

An alternative is to solder your White Metal castings together using Carrs 70 Red Label 70^o Low Melting Point solder and flux. The iron should be run at a much lower heat so you do not melt the castings, this being achieved by using a domestic light dimmer switch, wired up the same as for a light, but substituting a plug and the iron for the light and lamp holder {I have a dimmer extension flex}. Experiment with adjusting the switch until you find the range of temperature at which the solder melts, but a scrap casting does not. (NOTE. as the iron is running on a lower voltage. it will take longer to heat up, so when you think the adjustment is correct, do check a few minutes later on another scrap casting to see that it doesn't melt). When attaching White Metal fittings to Brass, the surface of the Brass must be tinned with 145 solder, (or alternatively Carrs 188 solder paint), to allow the 70 solder to grip. The casting can then be soldered in place and fillets of 70 solder run into place with no risk of melting the casting.

Try to complete all time high temperature Brass soldering before you attach the delicate White Metal fittings!

CASTINGS

Condensor pipe semi circle, J68, J69

1



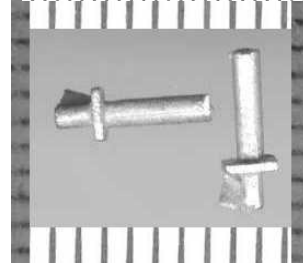
Condensor pipe straight

1



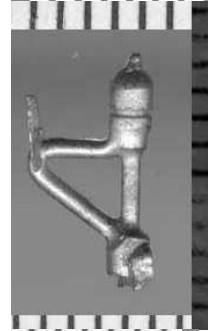
Tank Vent Pipes [fitted to all condensing locos, often retained when condensers removed]

Pair



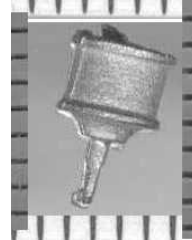
Bent pipe Whistle

1



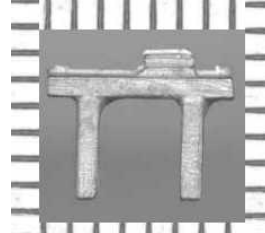
Brake cylinder, below footplate

1



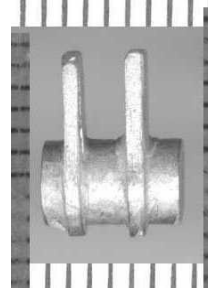
Brake cylinder Mount

1



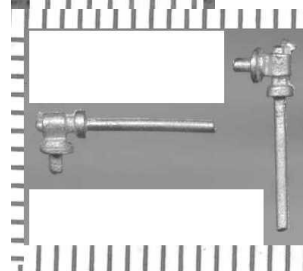
Brake reservoir

1



Clacks straight pipes

Pair



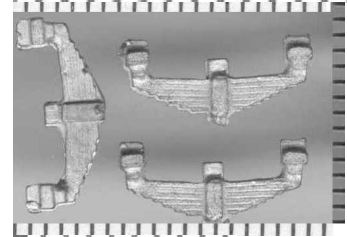
Crank for brakes

1



Driving wheel Springs

6



GER Dome

1



GER tall built up Chimney

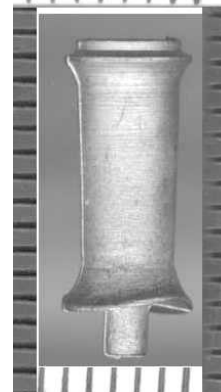
1



LNER Short replacement Darlington Chimney 1

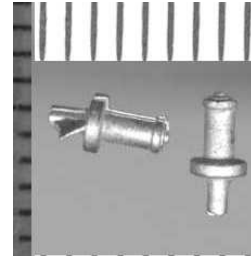


LNER Tall replacement Darlington Chimney 1



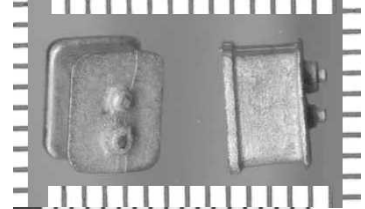
Ross Pop Safety valves

Pair



Sandboxes

Pair



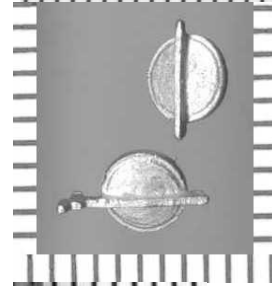
Smokebox Door later domed

1



Tank Fillers, GER tanks

Pair



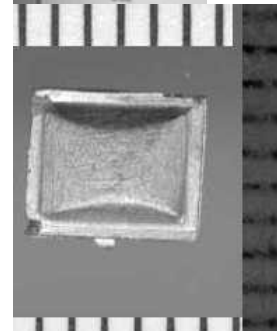
Brake standard

1



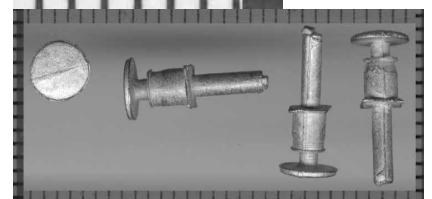
Cover for brake handle rear of cab

1



LNER group standard loco buffers

Set of
4



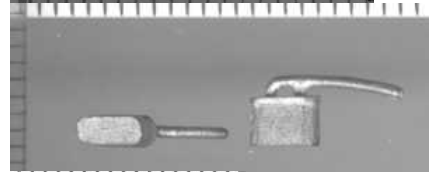
GER loco buffers, round base

Set of
4



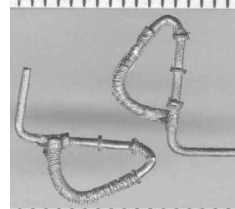
GER Ramsbottom Safety Valve, No seating

Each



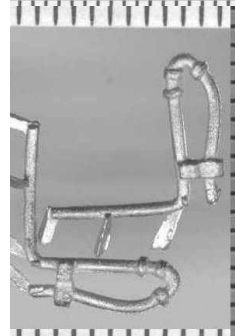
Vacuum pipes

Pair



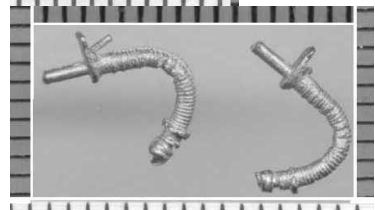
Westinghouse pipes

Pair



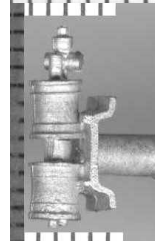
Steam heat Pipes - below buffers

Pair



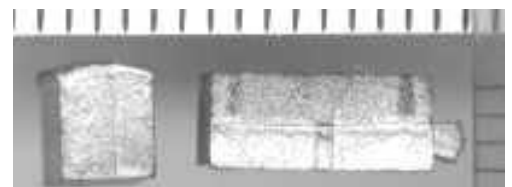
Westinghouse air compressor Pump.

1

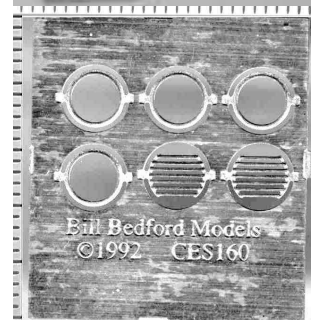


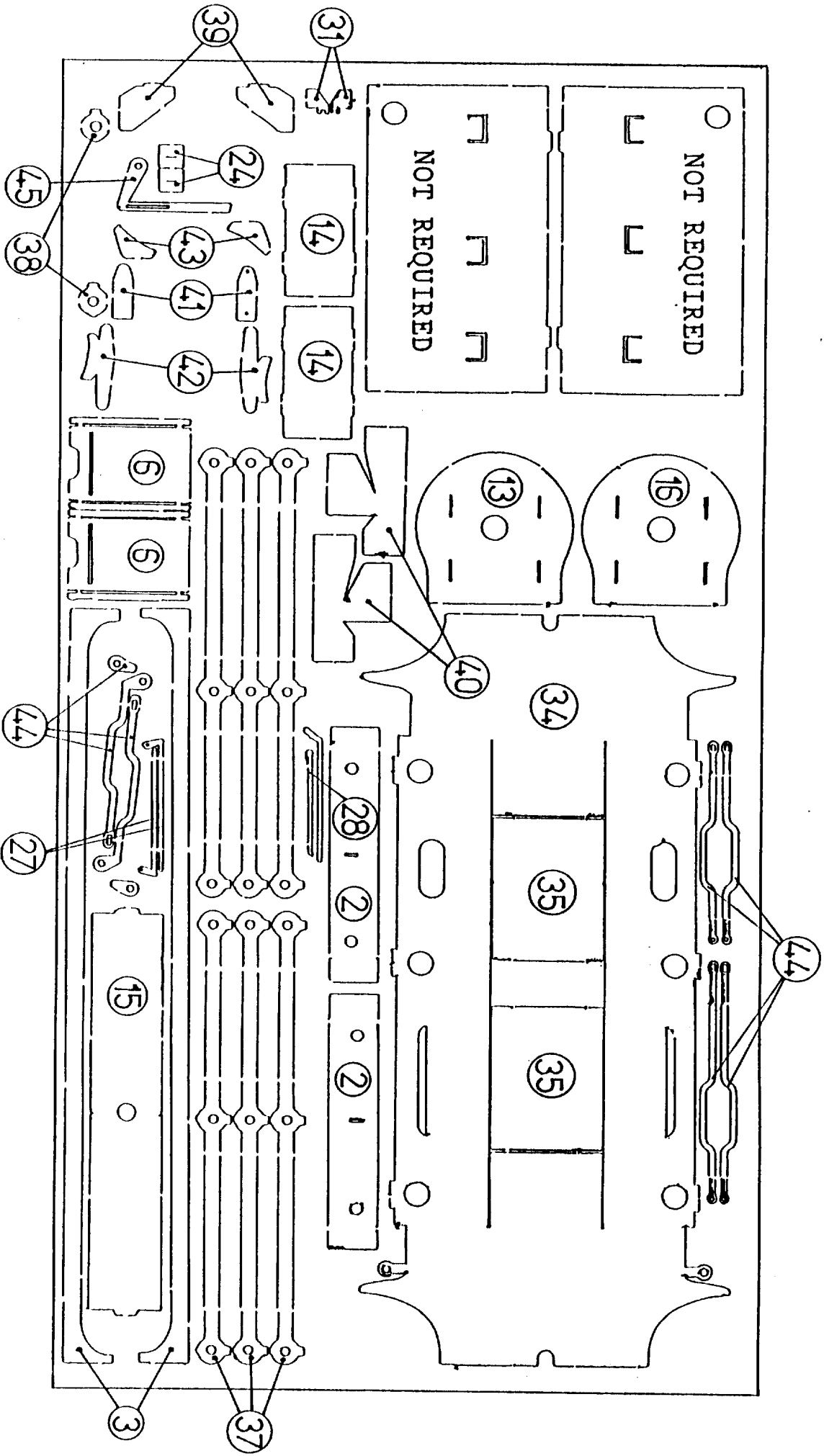
Not included - optional extras?

MS45 Tender / tank top Toolbox



Bill Bedford CES Etched GER spectacle
160 protective bars





POINTS TO NOTE

Parts are numbered in a logical assembly order. Tack solder a part in place, then adjust the next part to match. Some parts are designed oversize to be trimmed. Solder solid when happy.

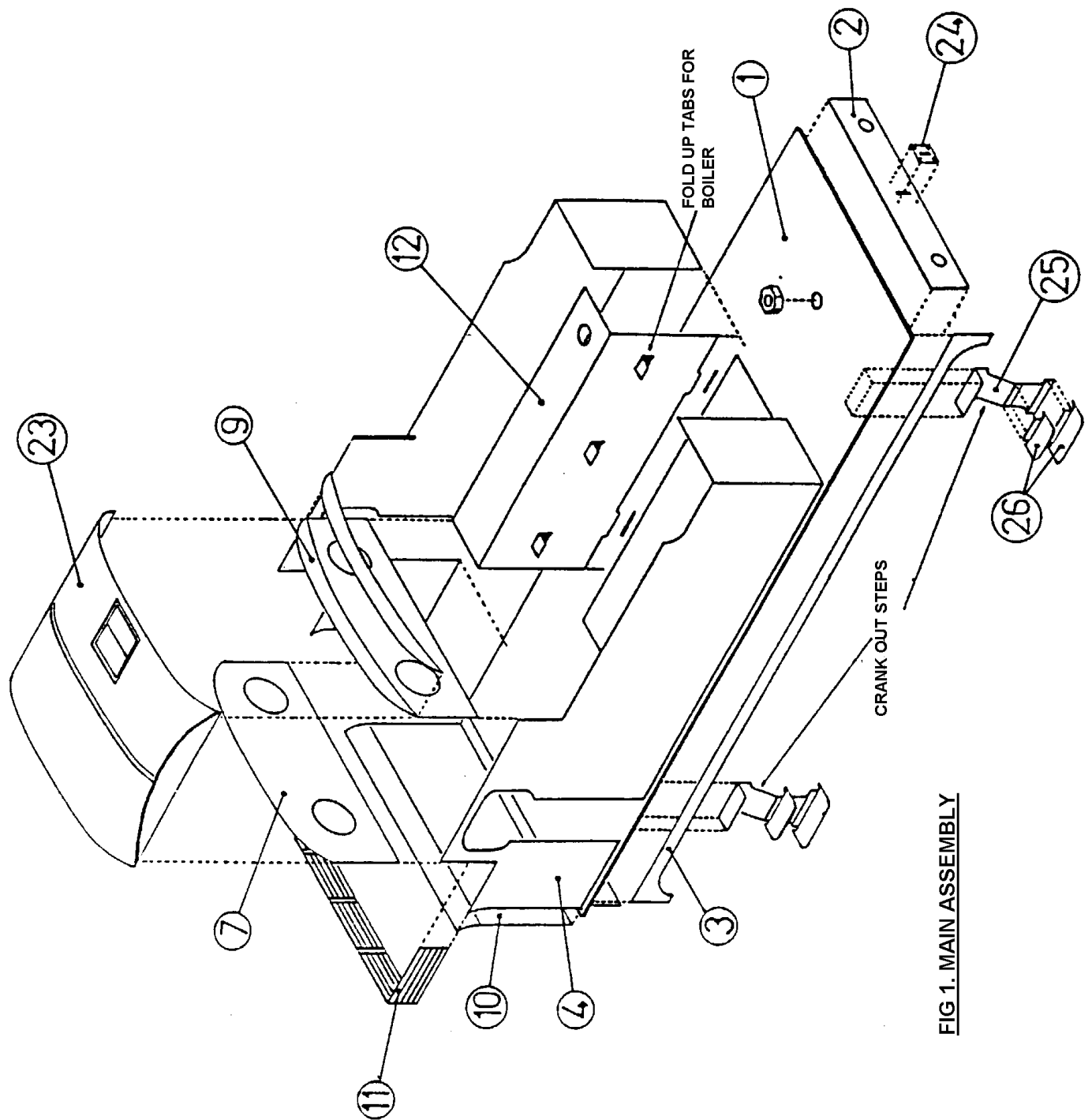


FIG 1. MAIN ASSEMBLY

FIG 1A. CAB BEADING/CAB DOORS

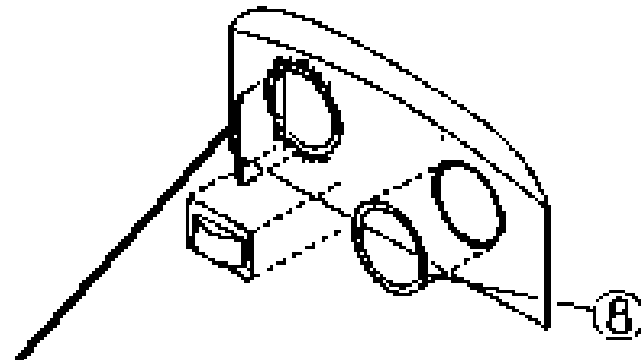
HOLAF ETCH INSIDE

⑤

**HANDRAILS FROM
0.3mm WIRE CUT
FLUSH WITH
BOTTOM OF SIDE
AND SPOT SOLDER
TO FOOTPLATE**

**FOLD OVER SPACING
STRIPS AND SOLDER
BEHIND CAB OPENING**

⑥



**FIT COAL BARS FROM 0.2mm WIRE AND
SPECTACLE RINGS BEFORE MAIN
ASSEMBLY**

Make boiler and smokebox separate assembly. Fit boiler between tanks and fit smokebox into slots on footplate. Line up and check for squareness then tack solder boiler to smokebox. Remove from between tanks and solder joint solid. Fit joint ring then solder into main assembly.

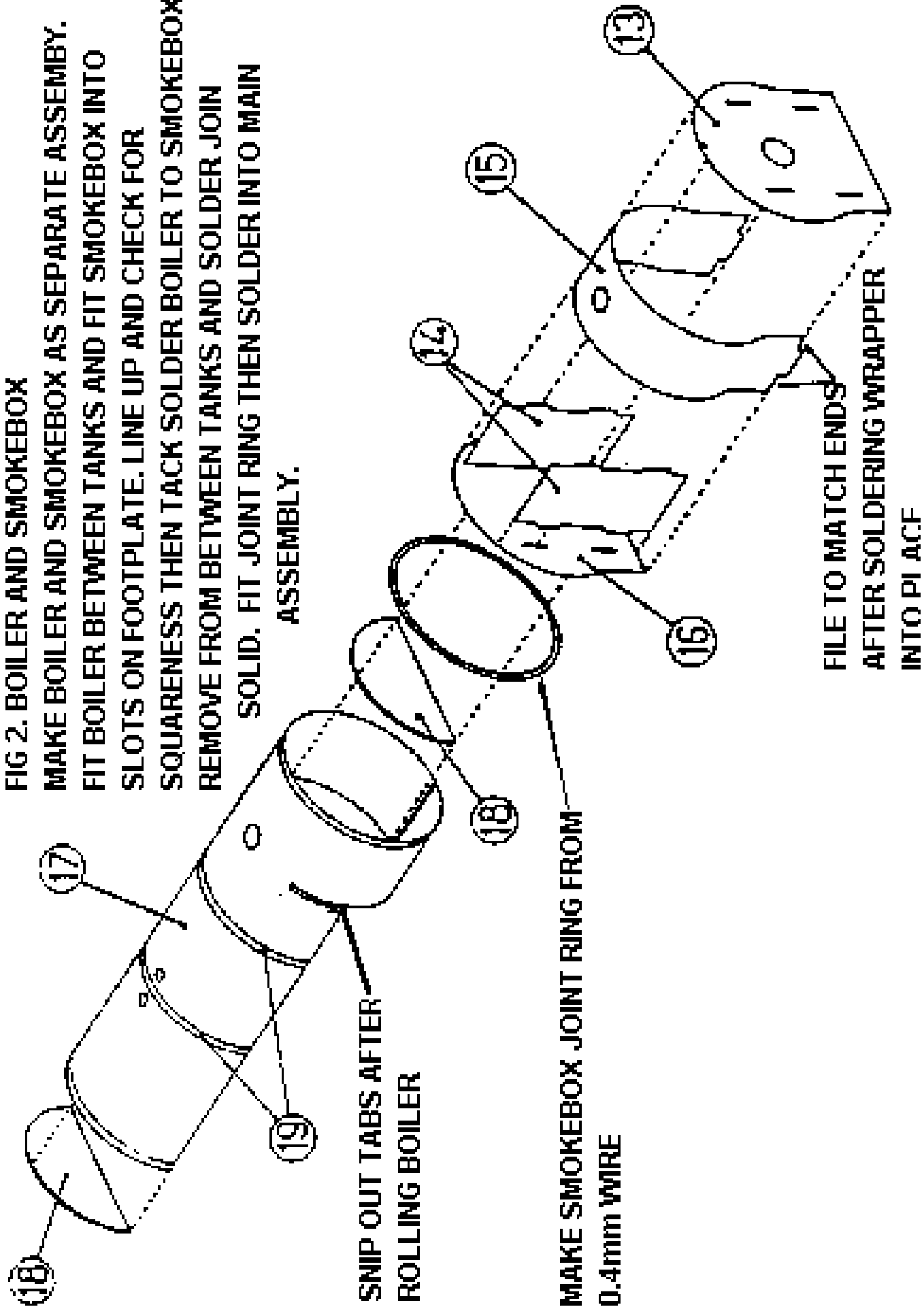
BOILER AND SMOKEBOX

Preform boiler, pin a former to a block of wood and solder boiler end to this. Repeat for other end, then finger and thumb boiler bottom circular and solder overlap joint.

SMOKEBOX

Drawing pin smokebox front to a block of wood, and roughly preform the smokebox wrapper using pipe and drill shanks. Position the wrapper to the centre of the smoke box front top, (note etched centre marks). Starting from the top work your way round, soldering to the front and using this as a former. Solder spacers in place and then smokebox rear to wrapper.

FIG 2. BOILER AND SMOKEBOX
MAKE BOILER AND SMOKEBOX AS SEPARATE ASSEMBLY.
FIT BOILER BETWEEN TANKS AND FIT SMOKEBOX INTO
SLOTS ON FOOTPLATE. LINE UP AND CHECK FOR
SQUARENESS THEN TACK SOLDER BOILER TO SMOKEBOX.
REMOVE FROM BETWEEN TANKS AND SOLDER JOIN
SOLID. FIT JOINT RING THEN SOLDER INTO MAIN
ASSEMBLY.



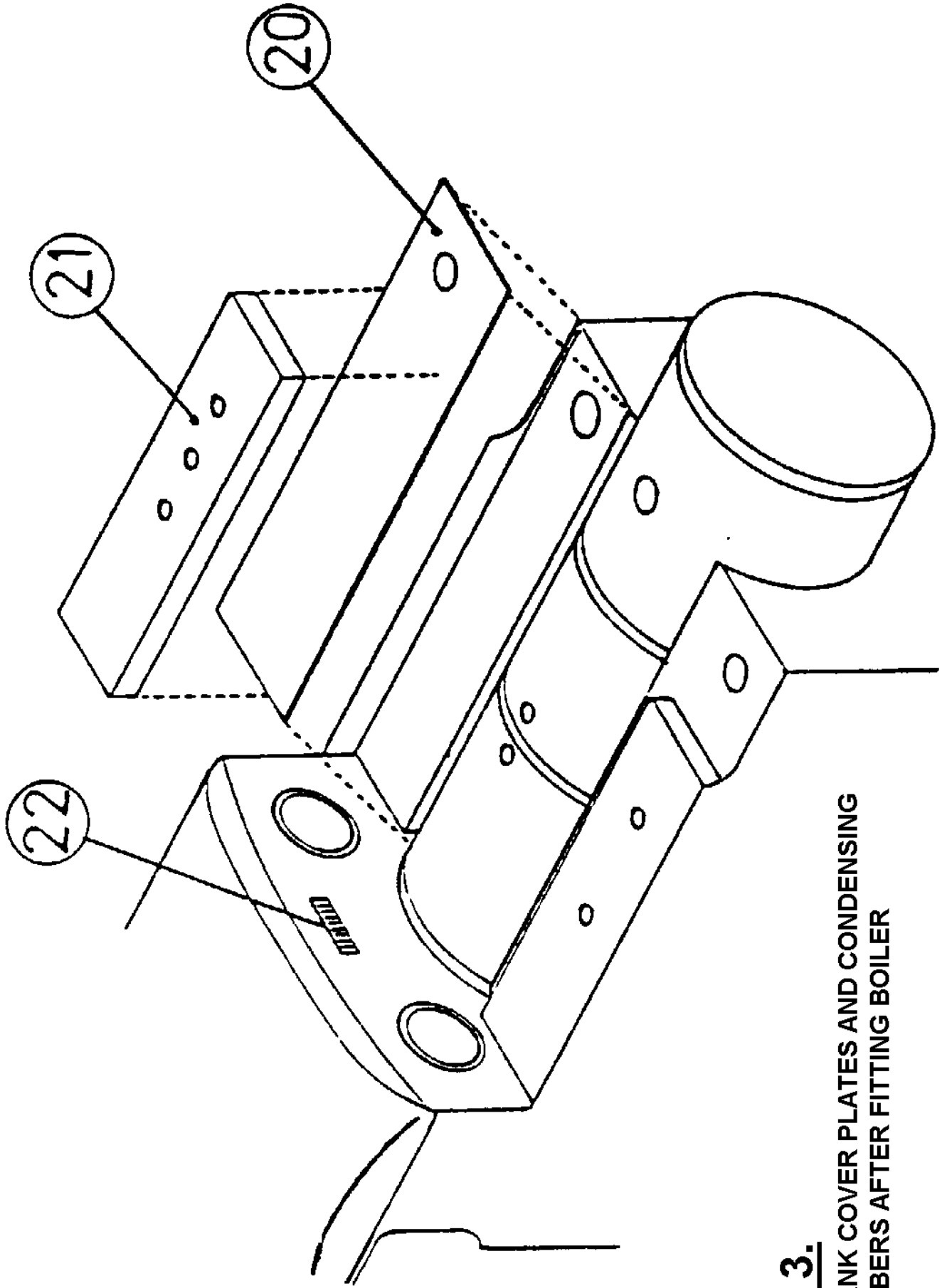


FIG 3.
FIT TANK COVER PLATES AND CONDENSING
CHAMBERS AFTER FITTING BOILER

CHASSIS

The chassis fret is labelled J67 as the earlier R24 locomotive.
Passenger locomotives Driving Wheels 4' 0" 10 spoke in line available from us. Other nearest available are.

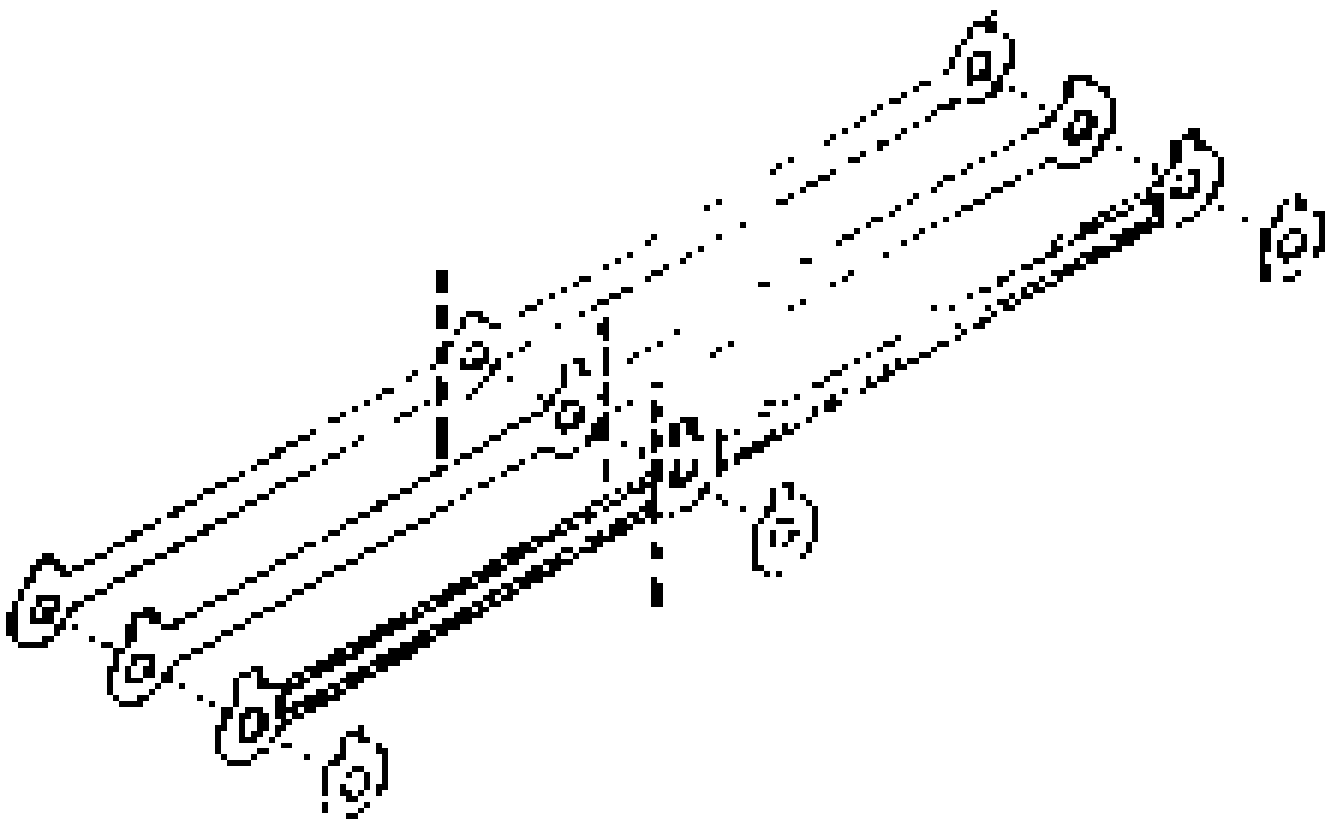
4' 0"	12 mm	10	Pin Between	3 mm throw	Sharman M414
-------	-------	----	-------------	------------	--------------

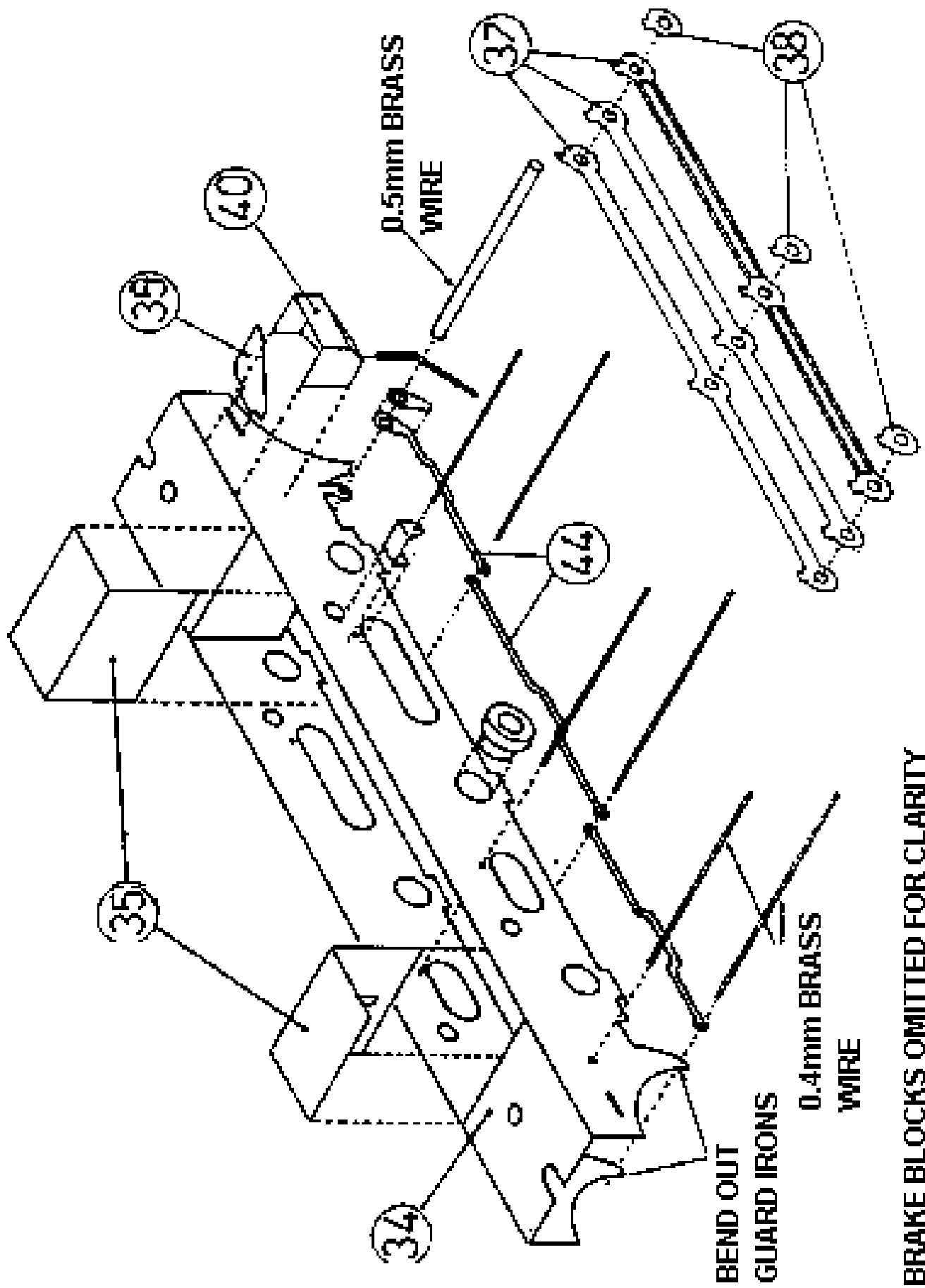
Many Buckjumpers had cast iron wheels with 15 spokes for shunting only,
This wheel is available from us.

The LNER fitted some shunting Buckjumpers with 12 spoke wheels nearest available are

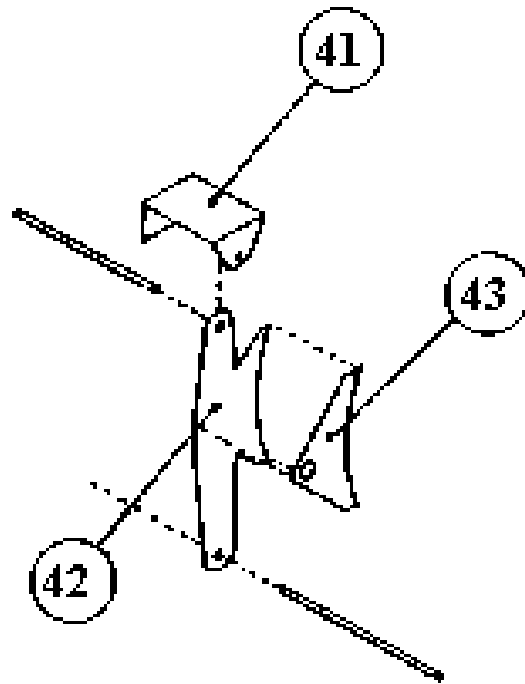
4' 0"	12 mm	12	Short		3 mm Soc W27 for 12mm or W25 for 14.2
4' 0"	12 mm	12	In Line	2.5 mm throw	Sharman M416

Fit top wire across chassis first, then thread brake hangers and block over this. Solder in place just clear of wheel. Then fit bottom wire and pull rods.

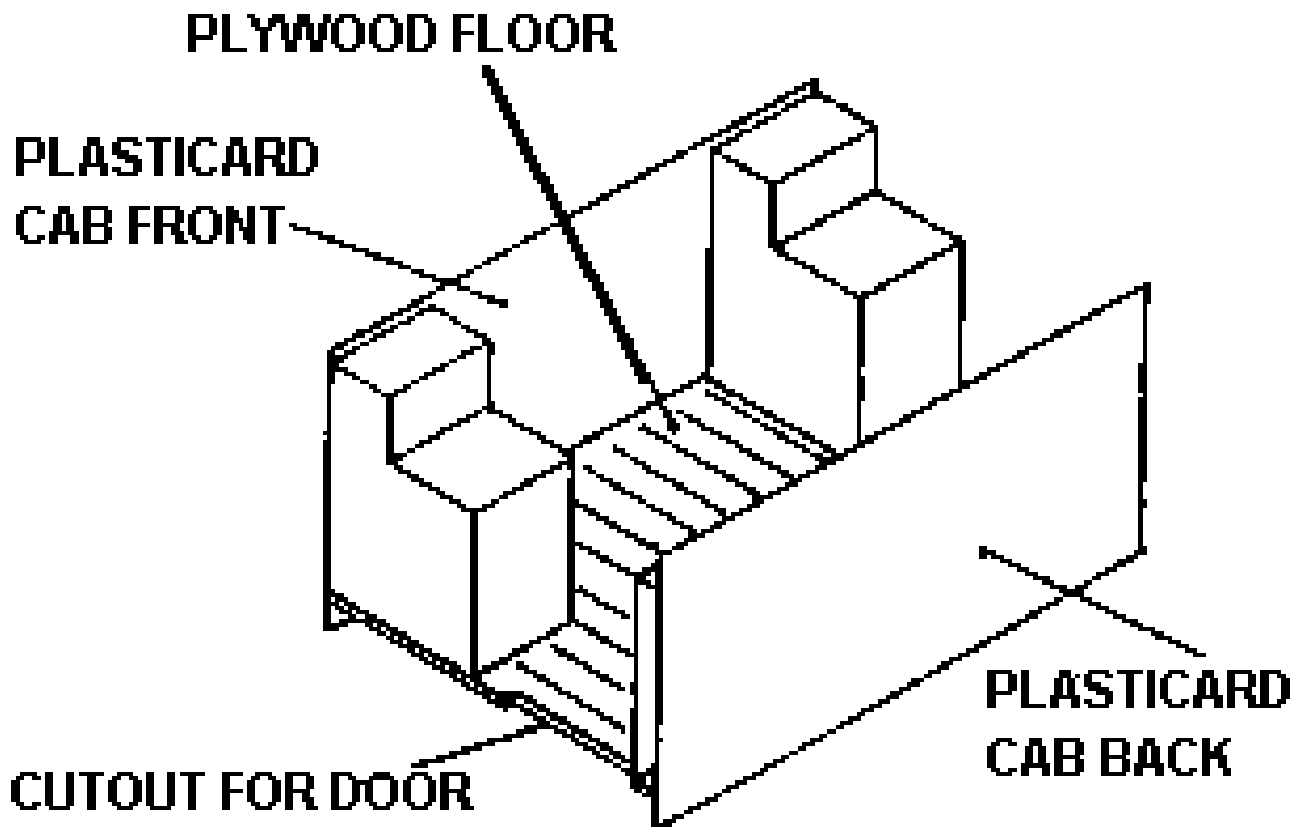


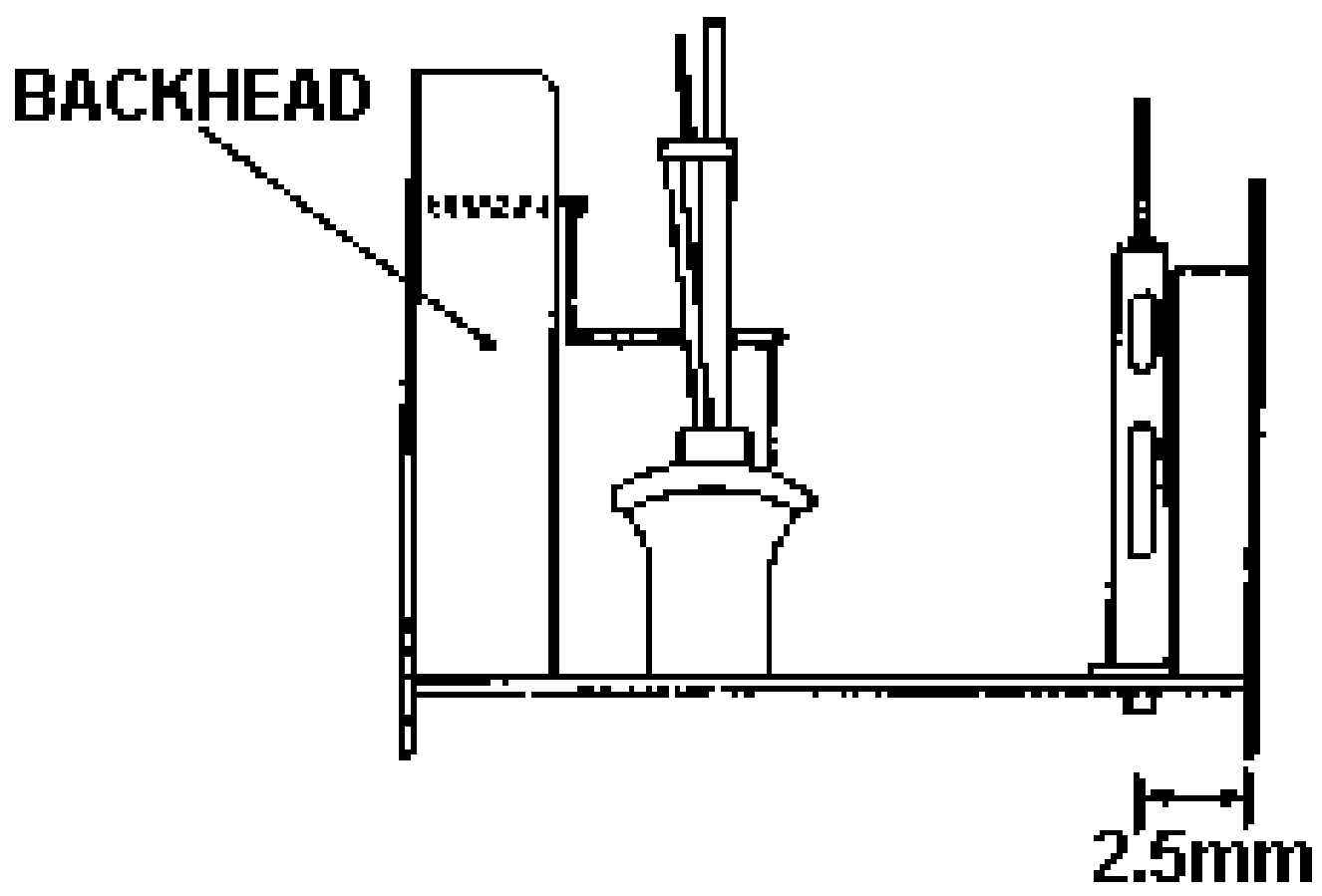
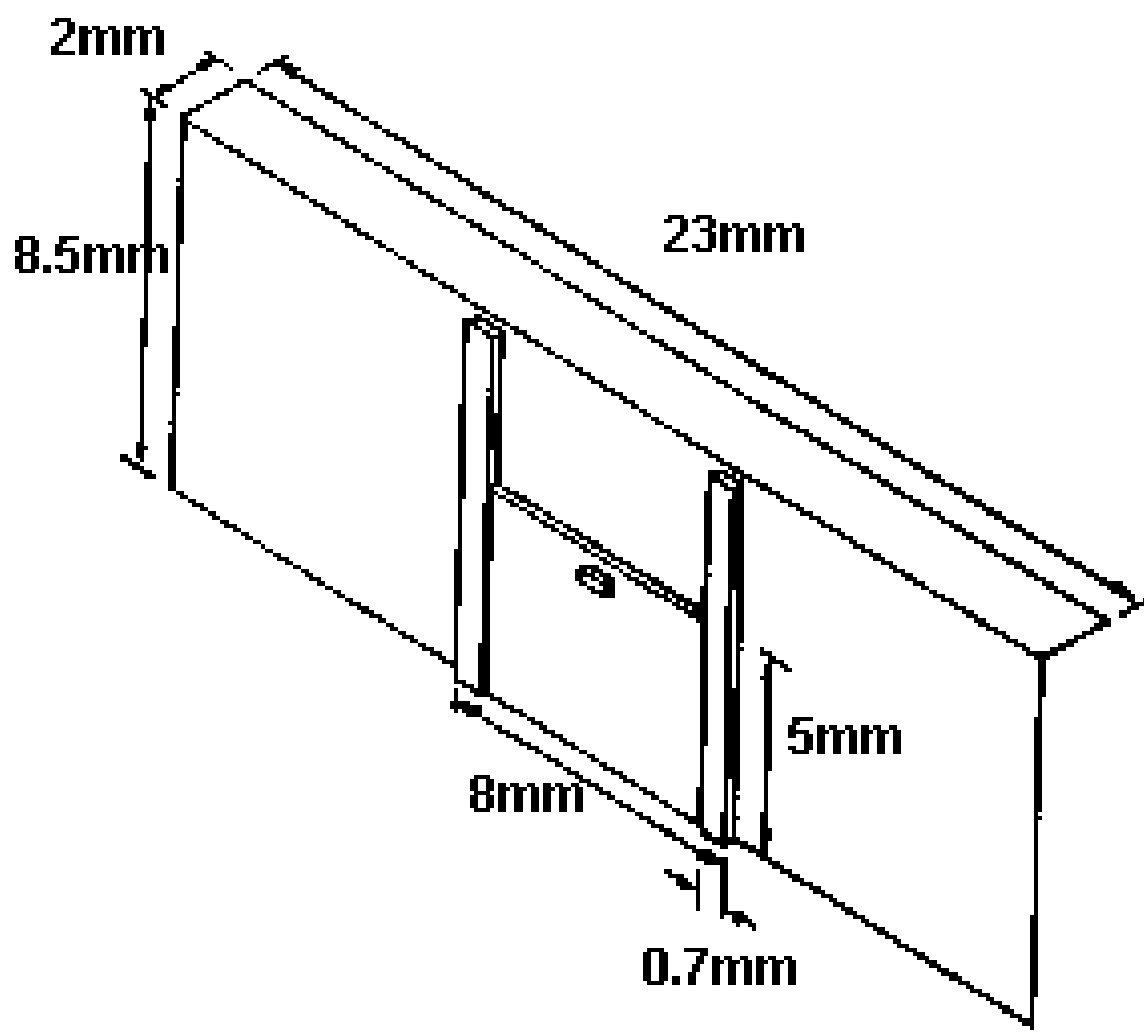


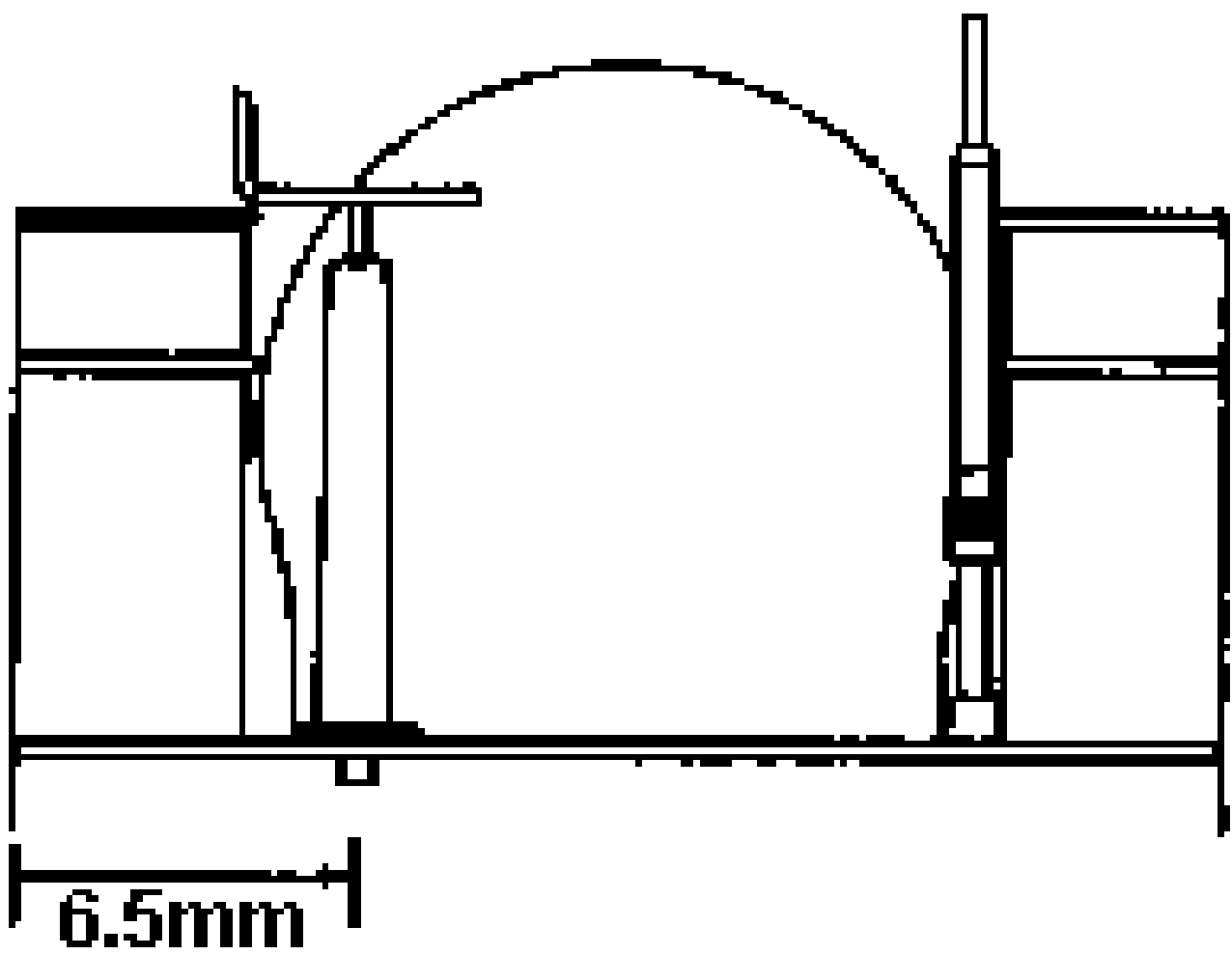
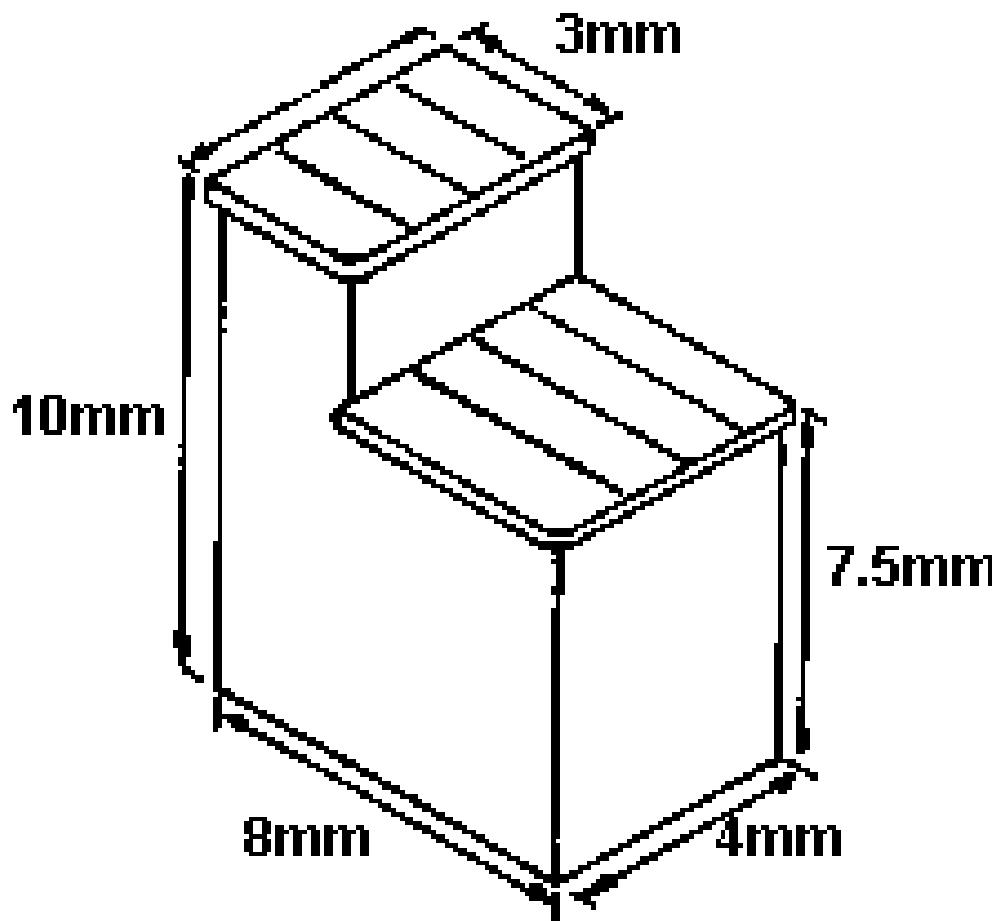
BRAKE BLOCKS OMITTED FOR CLARITY



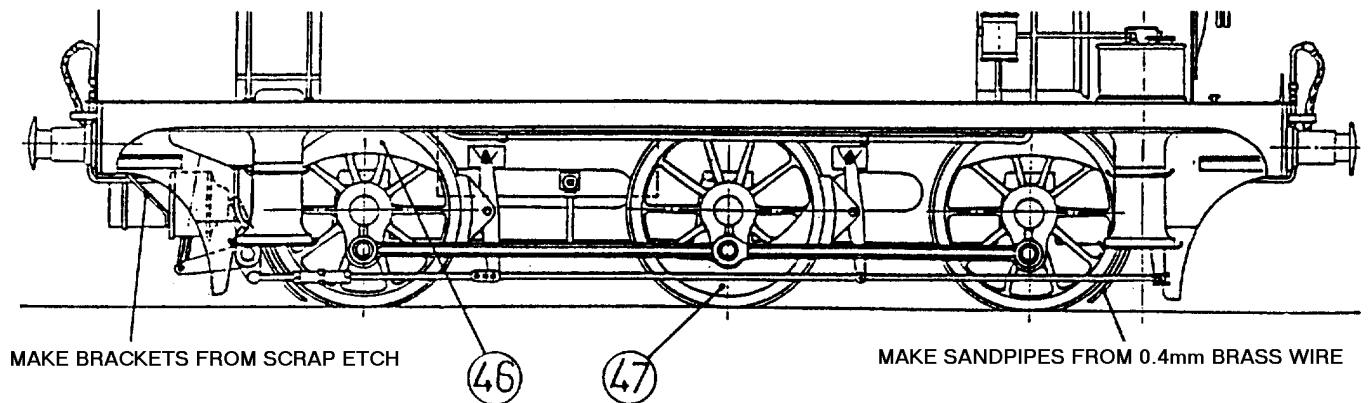
CAB DETAIL The kit does not include cab detail. Below are instructions to scratchbuild a reasonable cab interior.



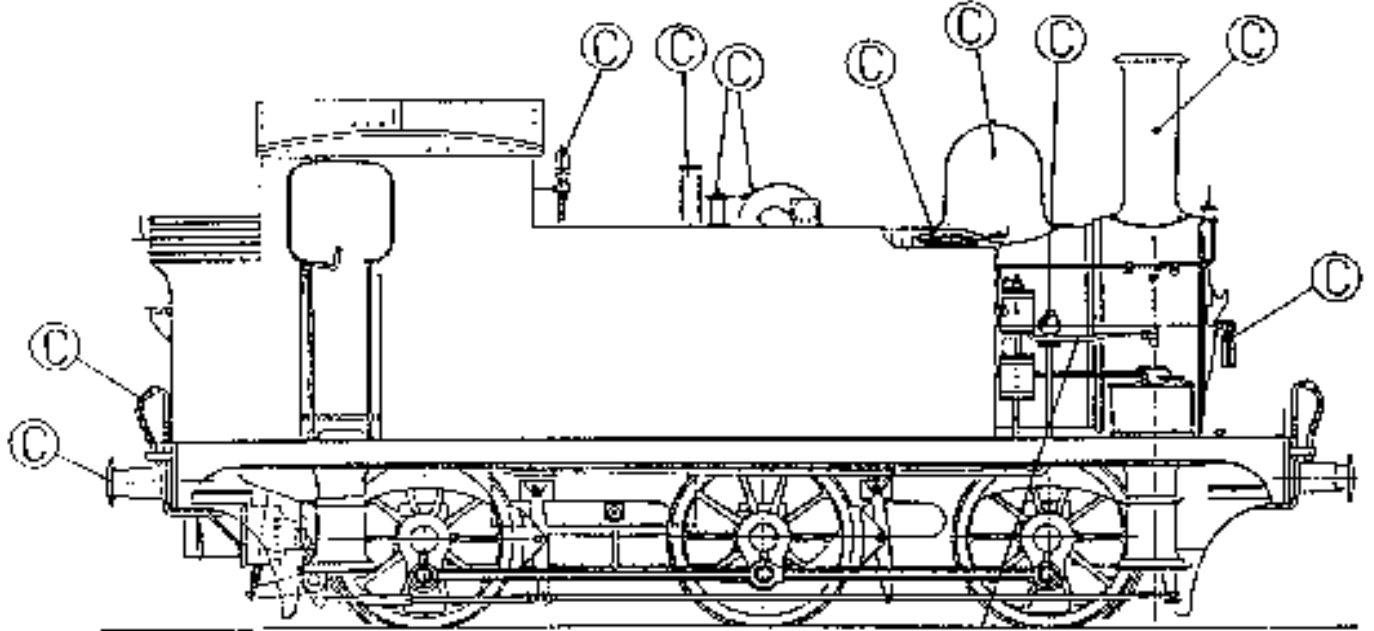




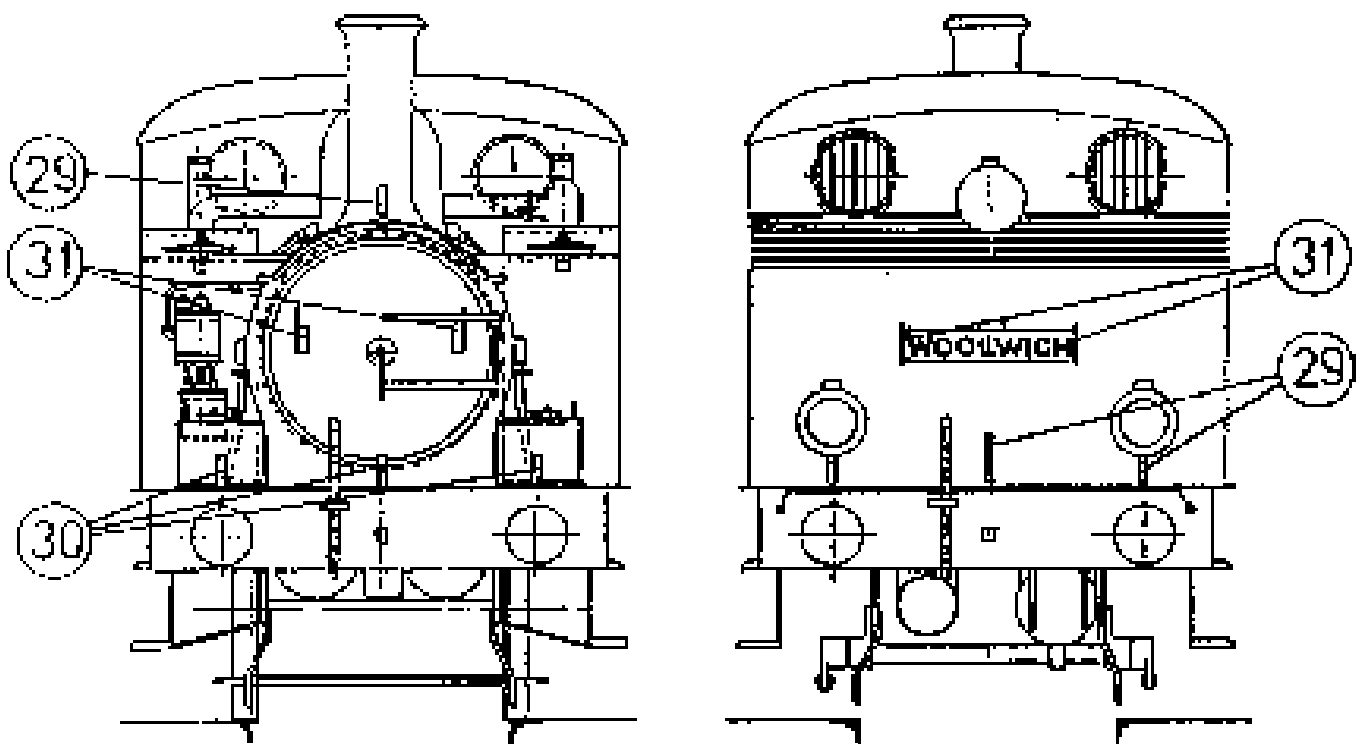
SANDBOX OPERATING RODS. Twist 90° just behind crank, thread over peg on sandbox and spot solder to tank front.

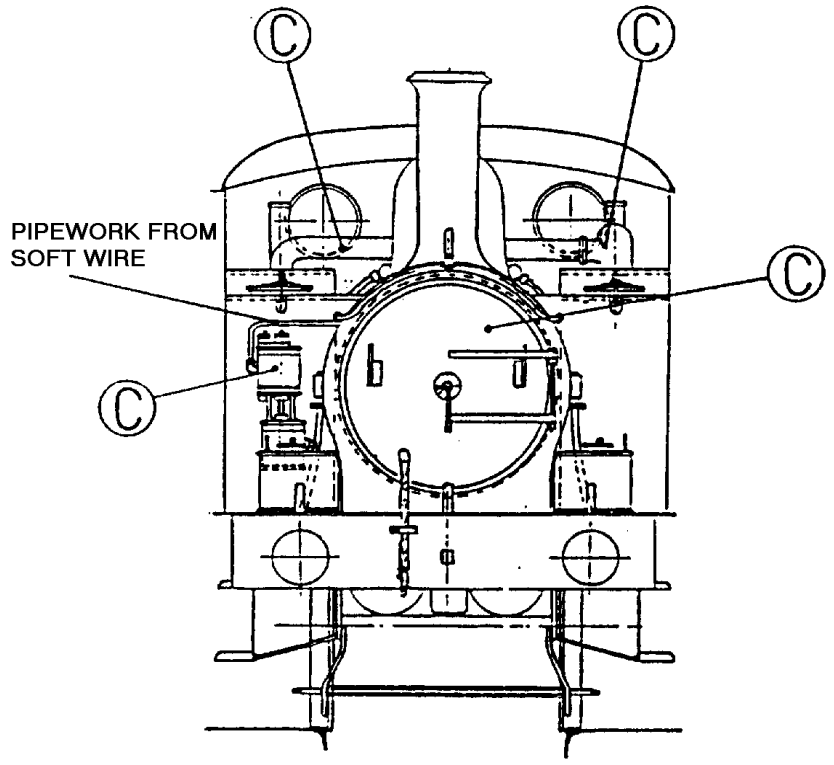
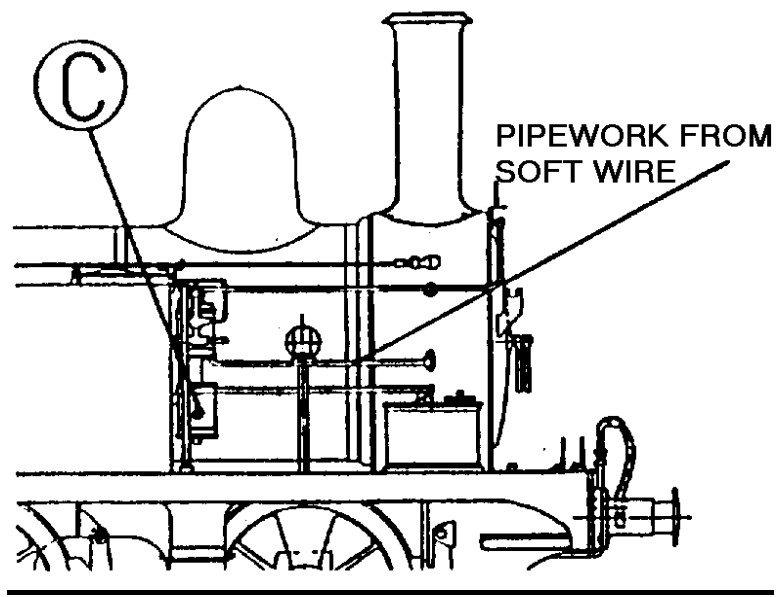
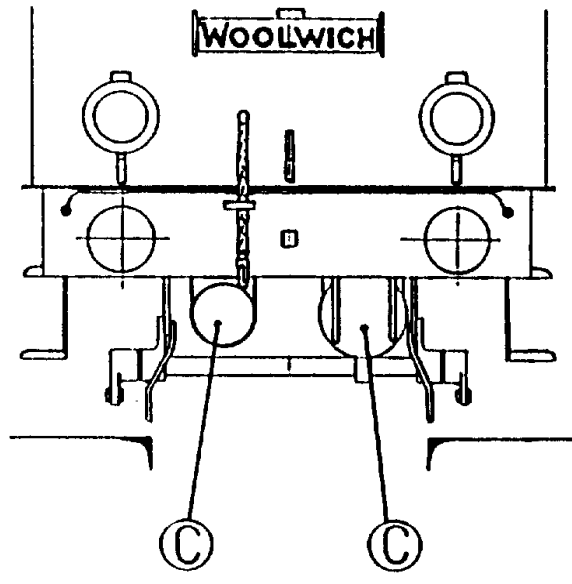


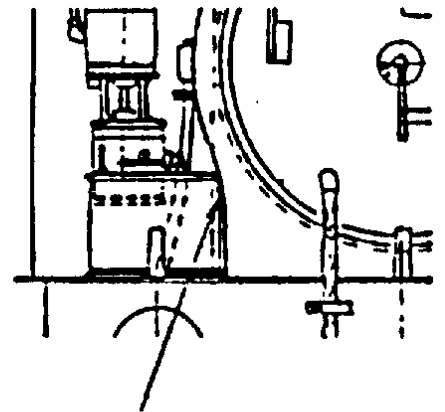
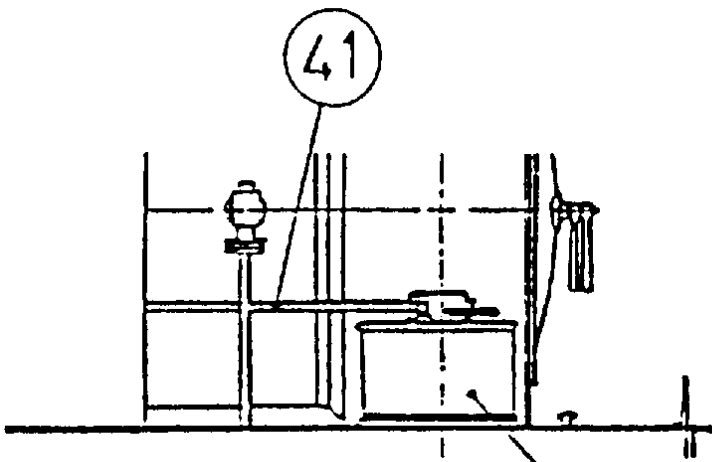
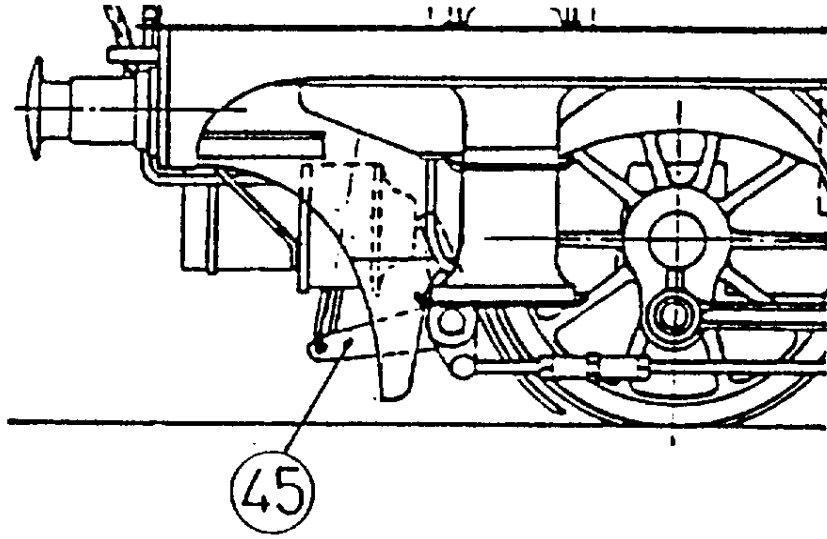
FIT REMAINING BODY CASTINGS WITH REFERENCE TO DRAWINGS



PIPEWORK FROM SOFT WIRE







SANDBOXES. FILE RADIUS ON REAR TO MATCH SMOKEBOX CURVE

