SLATER'S PLASTIKARD

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Ref. 7C022

Southern Railway
"BY" Guards Van

SR 4 Wheeled Passenger Guards Van. Code BY (SR code "Van C")

The southern railway had inherited a large number of luggage vans from its constituent companies and it did not need to build any new ones for some considerable time.

When a design was eventually prepared it was in fact a stretched version of the PLV with a 4' guards compartment added in the middle. The body length being increased to 36ft and the wheelbase to 23ft.

Although the origin of the vehicle was the PLV it incorparated many new features which were also included in the "Bogie B" vehicles built a year later. The BY's were fitted with vacumm brakes, electric lighting with steam heating and guards periscopes in the guards compartment. The Southern Railway code for these vehicles was "Van C". Tare weight was 16 tons carrying capacity was 10 tons.

The first batch off fifty vans were ordered in March 1936 and built in June/July 1937, vehicles Nos 400-49. A second batch of hundred vehicles was authorised in March 1937 and built between March and September 1938 Nos 651-750.

A further fifty vans were completed between March and October 1939 Nos 751-800 and a final batch of fifty built between 1940-41 Nos 931-80 making a total of 250 all to diagram 3092.

Some of the new vans were used on both parcels and passenger trains on the Chatham Main Line from the summer of 1937 and as more vans were built they were incorporated into newspaper trains for the West Country. Two vehicles Nos 660 & 661 received roofboards and were stencilled on the Solebars " To work between Yeovil and Derby". The vans carried dairy products from Yeovil on a regular daily basis until the contract was cancelled in August 1939.

By 1941 Nos 400-19 had been fitted with stoves. Such a fitting was neccessary when the vans were used in goods trains with no steam heating These stove fitted vans were distinguished by an orange painted panel on the top four planks at each end and by an orange painted guards door. The stove fitted vans were not allowed to be worked off the SR. By 1941 Nos 400-1 had been fitted with side lamp irons to work the West Country fast freight services.

Livery in SR days was Green, body ends grey and the roof, solebars and below were Black.The letters "Southern Railway" and the van numbers were gold shaded black with the remainder of the lettering in Yellow. The word "Railway" was later dispenced with. In 1949 BR introduced the crimson livery for the vans and probably all got repainted in the new livery with yellow lettering. From mid 1956 green again became the standard Southern livery again with yellow lettering.

In 1966 van Nos 420-30 were also fitted with stoves. In 1969 all the vans in 400-30 series had the stoves removed and at the same time the vans started having their electric lights removed and were now regarded as parcels vans and as such worked far and wide off the Southern region.

Their final livery change came in 1967 when they were repainted in BR rail blue for the sides and ends with black solebars and below and white lettering.

SCRAPPING

Van no 777 suffered accident damage and was cut up in 1950.Withdrawals began with no 797 in May 1966 and continued steadily, the last one, no 713 in August 1978. seventeen survived into departmental use Nos 405/8/412/419/423/434/435-6/683/687/699/700/710/712/732/746/764/964 and several have been privately preserved 404/7/440/442/653/765/798/931/.

Do study as many photographs as possible. We can recommend the book "Southern Railway Passenger Vans" by David Gould (Oakwood Press 1992). It lists examples of vehicles preserved. We are also indebted to Ray Chorley for the loan of the General Arrangement Drawings and additional information in the preparation of this kit.

INSIDE LIVERY

In SR days the inside of the vans were painted pale green with a white roof. The stove (in those vans fitted with one) was painted purple brown. Drop lights and other wooden framing to the windows were varnished, probably teak.

In BR days the walls were finished in a reddish brown with a white ceiling. Woodwork in the guard's compartment was cream with matt black panels around the stove.

The Window Bars and Mesh on the Luggage Doors were painted white.

CONSTRUCTION.

With this kit we have attempted to show by a number of exploded drawings the position of the various components rather than a long description of how to assemble the kit, however we hope these few notes will prove useful.

RECOMMENDED TOOLS.

The following tools are recommended to aid you in the assembly of this model.

1. A good sharp knife. We recommend a "Swann-Morton" No 3 surgical scalpel with No.10 and 10a blades.

2. Needle files. Flat, round and square are all you should need. No.2 cut we find is most suitable for plastic.

3. Tweezers. To help you locate small parts.

4. We recommend Slater's Mek Pak liquid cement adhesive and our Mek Pak brush to apply it with. DO NOT USE TUBE CEMENT OR SOME OF THE MORE VISCOUS LIQUID CEMENTS as due to the thin cross sectional area of the plastic mouldings these adhesives can continue working through the plastic and cause distortion of the plastic surface.

5. A set of instrument pliers with good square jaws to bend the etchings with.

6. A set of sharp sidecutters.

7. A set of taper broaches - to clean out the small holes in the etchings.

8. A small pin chuck to hold the various number size drills listed in the drawings.

9. A tube of Loctite (Cyanoacrylate Adhesive).

10. A roll of masking tape.

GENERAL ASSEMBLY INSTRUCTIONS.

1. You will need a good flat surface to lay the various parts on whilst joining them together. LEAVE THE JOINED HALVES FOR AT LEAST AN HOUR TO ALLOW THE JOINT TO HARDEN.

2. Drill out the various holes for the Lost Wax fittings and check that the parts fit correctly into their respective holes. It is not advisable to fit the lost wax parts at this stage.

3. Most modellers leave the painting to last, however it is much easier to paint the sides and ends at this stage before the glazing and components have been fitted to the sides. The ONLY precaution is to ensure that you DO NOT paint the surfaces which have to be joined. Cover these with masking tape FIRST.

4. If you have painted the sides whilst "In the flat" you can now fit the glazing and window Bars/Mesh. Study the drawing No 1 and note the correct positioning of the mesh and the bars. The mesh and bars are etched in pairs and are correctly spaced, when assembled correctly they will line up with each other and with the door windows. First fasten a piece of masking tape tacky side upwards onto a flat surface, now place the fine mesh onto the masking tape, the adhesive on the masking tape will stop the mesh from moving around, next place the bars ontop of the mesh and align correctly, using a pin put a small drop of loctite between the two halves so that they bond together. Use the loctite very sparingly or you will simply fill in the fine mesh and spoil the etching. Once the two halves have been correctly bonded together they can be painted white. If you do not have a spray gun then buy a white aerosol can from a car spares shop and carefully spray two or three light mist coates onto each side. Allow each coat to dry before applying the next coat. Once dry fit the assembly to the insides of the doors. The heavy bars go directly behind the glass, with the mesh on the inside of the vehicle.

5. Before starting to assemble the underframe study figure No 5 carefully. As the underframe when complete is quite "cluttered" it will be easier if the battery boxes, vac cylinder and vac reservoir cylinder are fitted last. First fit the axleguards (W.irons) to one side only and leave to set firmly making sure that they are set vertically to the solebar. Next fit the brass bearing cups and then ease a wheel set into each axleguard and at the sametime fit the other axleguard. DO NOT adjust the wheelsets until the axleguards are firmly bonded to the solebar. Now adjust the wheel sets so that they are central between the axleguards by easing the brass bearings into postion, the wheel sets should have no side play when the bearings are set correctly. LOCTITE BEARINGS into axleguards when set up correctly. Now fit the pairs of moulded brake shoes by easing in between the face of the wheel set and axleguard and locating between the lugs on the floor. The back of the brake shoes will need scraping away slightly to match the taper on the tread of the wheel and insure that the brake shoes do not rub on the wheel treads. Also drill out the small holes in the brake shoes for the pull beams with a No 74 drill (.022") before finally fitting into the chassis. Next fit the pull beams part Nos 8 & 9 remember to twist the arms through 90°first. Part No 8 with the long arms are on the inside of each set facing outwards. Drop part No 7 into place so that it is sandwiched between the two arms of the pull beams. Although holes are provided for 0.20" wire to fit through to lock the links together it is easier to simply line up by eye and Loctite in place.

6. When fitting the "V" hangers note that the two hangers fastened to the solebar are "joggled". fold into the crease and then run a fillet of solder into the crease to give them strength. It should be noted that on the etched fret all parts fold into the crease with the exception of part No 7 which is folded out of the crease.

7. A set of etched brass sprung axleguards is available for this kit if you wish to build a fully sprung vehicle REF NO: 71545.

FIG 1

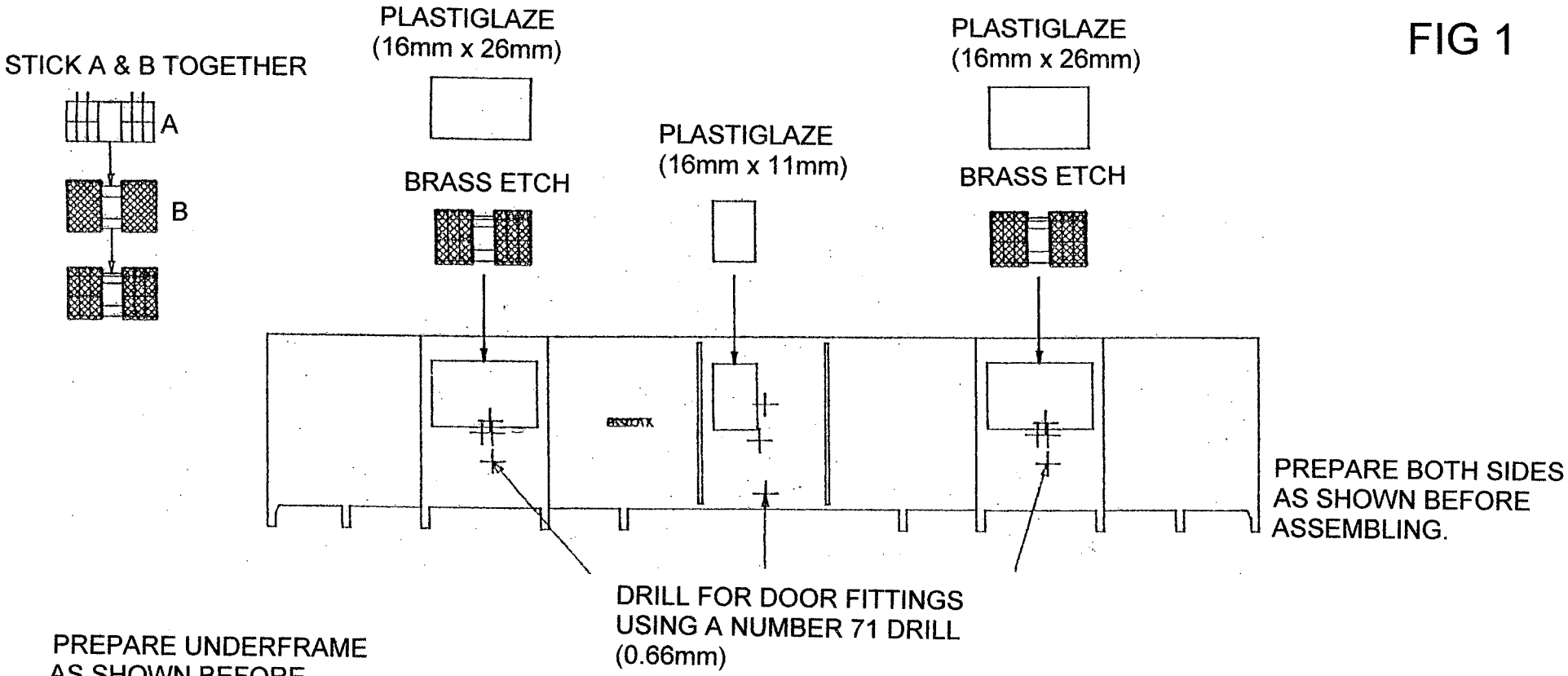
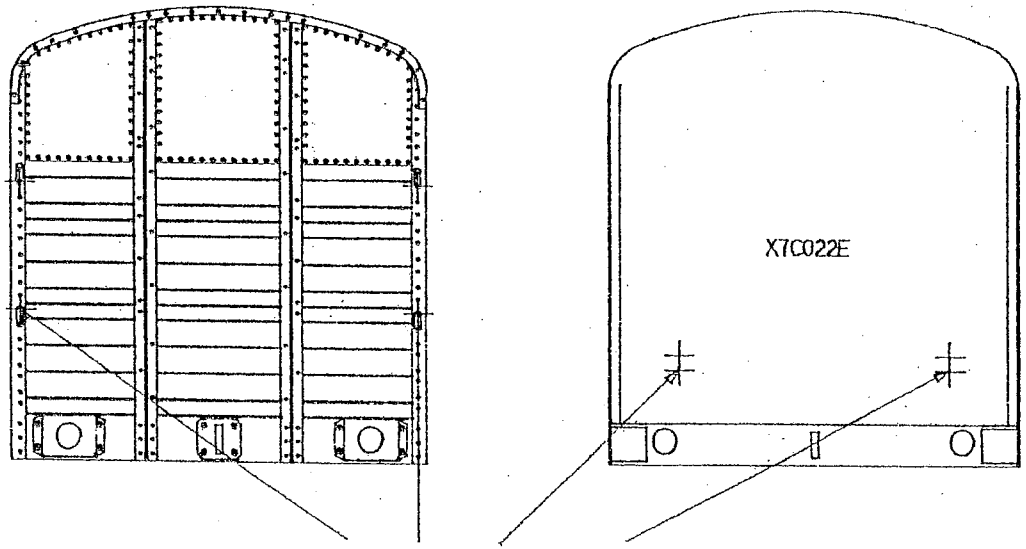
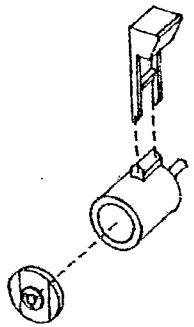

STICK A & B TOGETHER
A
B
PLASTIGLAZE
(16mm x 26mm)
BRASS ETCH
PLASTIGLAZE
(16mm x 11mm)
PLASTIGLAZE
(16mm x 26mm)
BRASS ETCH
PREPARE BOTH SIDES
AS SHOWN BEFORE
ASSEMBLING.
DRILL FOR DOOR FITTINGS
USING A NUMBER 71 DRILL
(0.66mm)
PREPARE UNDERFRAME
AS SHOWN BEFORE
ASSEMBLING.
DRILL ALL POINTS USING
A NO. 71 DRILL (0.66MM)
NOTE: ALL STEEL WORK WHICH
IS CROSS HATCHED, STICK
0.020 X 0.079 MICROSTRIP
PROVIDED

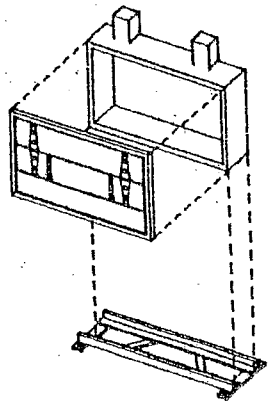
FIG 2



DRILL ALL POINTS USING
A NUMBER 71 DRILL 0.66mm

DYNAMO ASSEMBLY

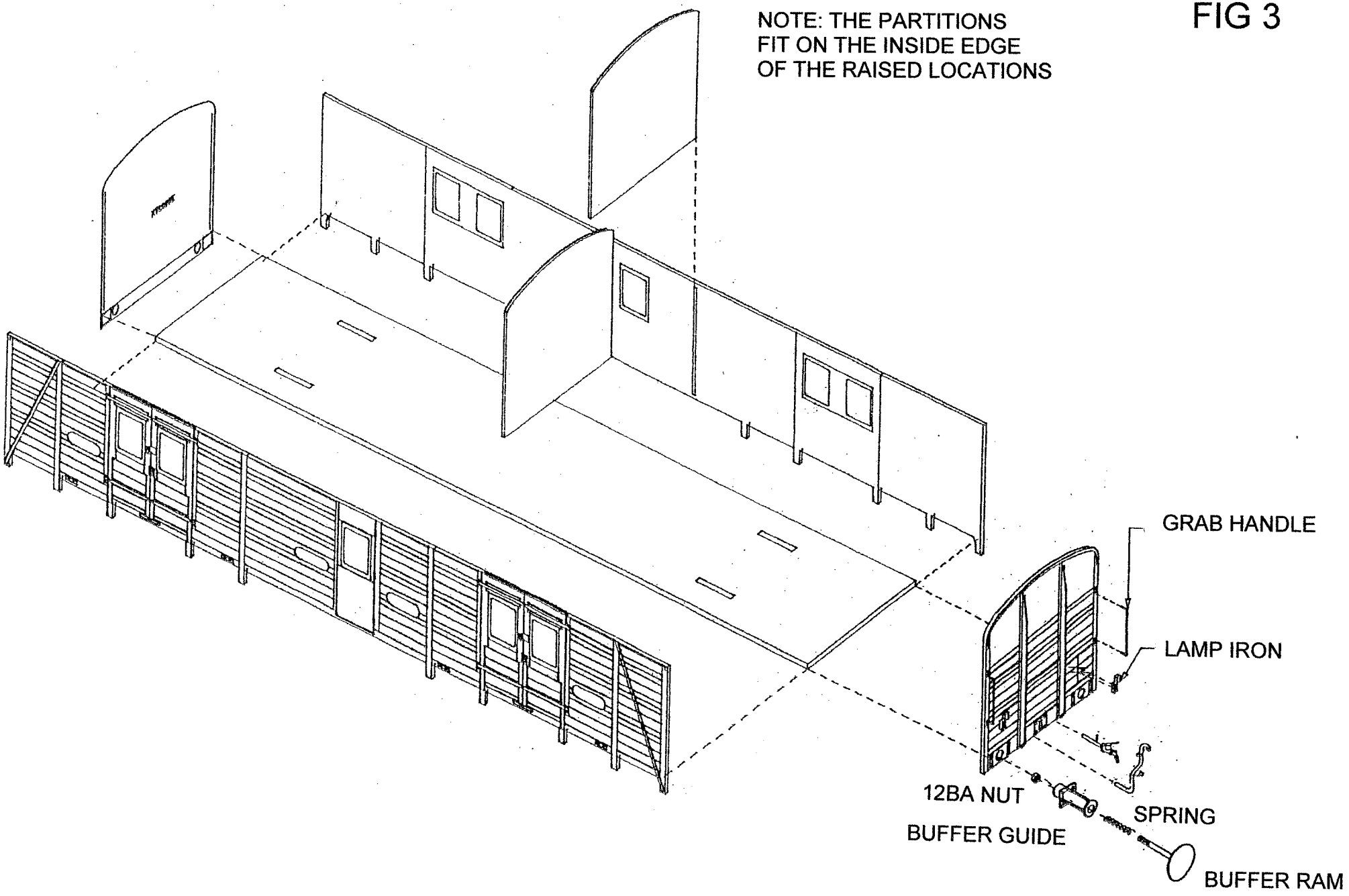




BATTERY BOX ASSEMBLY

DRILL ALL POINTS (+) USING
A NUMBER 76 DRILL (0.5mm)
THESE HOLES WILL THEN
USED TO LOCATE STEP BOARD
SUPPORTS.

FIG 3


NOTE: THE PARTITIONS
FIT ON THE INSIDE EDGE
OF THE RAISED LOCATIONS
GRAB HANDLE
LAMP IRON
12BA NUT
BUFFER GUIDE
SPRING
BUFFER RAM

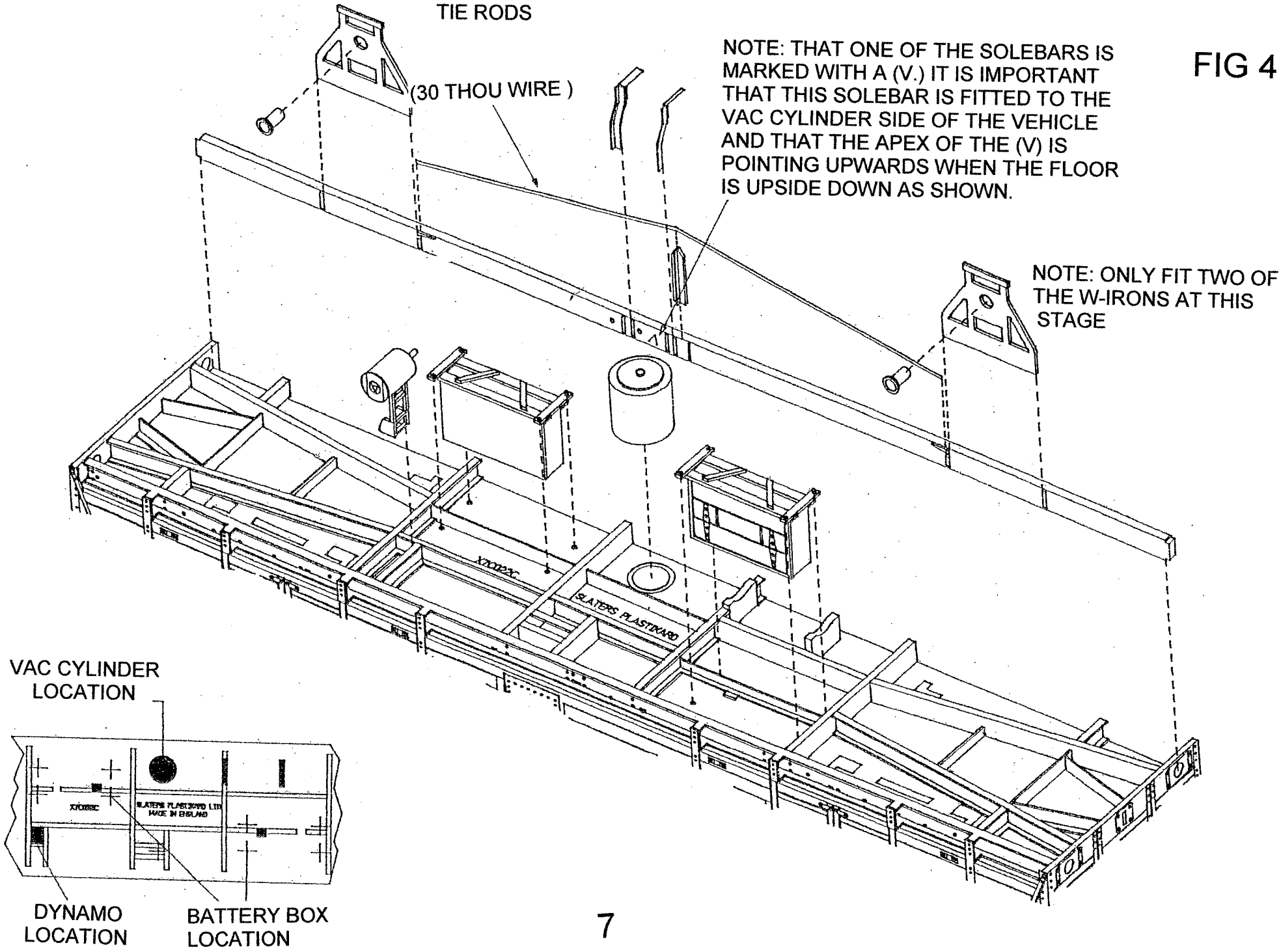

TIE RODS
(30 THOU WIRE)
NOTE: THAT ONE OF THE SOLEBARS IS MARKED WITH A (V.) IT IS IMPORTANT THAT THIS SOLEBAR IS FITTED TO THE VAC CYLINDER SIDE OF THE VEHICLE AND THAT THE APEX OF THE (V) IS POINTING UPWARDS WHEN THE FLOOR IS UPSIDE DOWN AS SHOWN.
NOTE: ONLY FIT TWO OF THE W-IRONS AT THIS STAGE
SLATERS PLASTIBOARD
VAC CYLINDER LOCATION
DYNAMO LOCATION
BATTERY BOX LOCATION

FIG 4

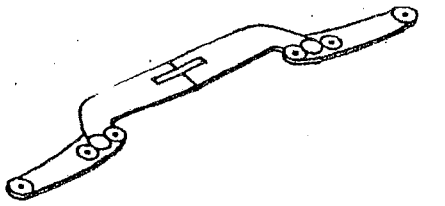
TWIST THE CONNECTING RODS ON PART NO. 8 & 9. THROUGH 90 DEGREE'S AS SHOWN.

PULL RODS MADE FROM 0.030" (0.762MM)

0.030" (0.762MM)

1/16" DIA, X 0.030" I.D. TUBE.

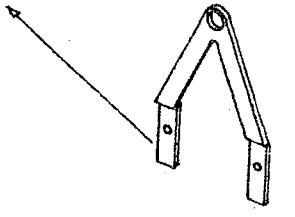
THE V HANGERS LOCATE ON TWO LOCATING PEGS ON THE SOLEBAR.



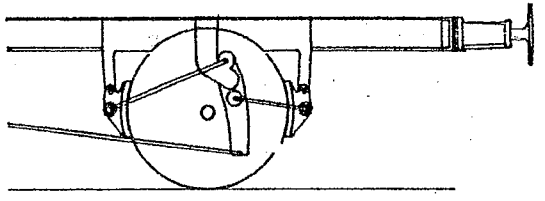
FOLD OUT THE CREASE

FOLD PART NO. 7 AS SHOWN

'V' HANGERS SHOULD BE JOGGLED AS SHOWN, WHEN FITTING 'V' HANGERS TO MAIN ASSEMBLY THE JOGGLE SHOULD FACE INWARDS.



A SIDE VIEW OF HOW THE ETCHED & PLASTIC PARTS SHOULD LOOK



THIS BRAKE ASSEMBLY IS MIRRORED ie. THE SHORT ARMED BRAKE BEAM IS ALWAYS TO THE OUTSIDE OF THE VEHICLE.

PARTS NO. 2 & 3 SHOWN ABOVE NEED THE RIVETS PUNCHED IN AND THEN ASSEMBLED. SLIDE THE ASSEMBLED PART ONTO THE BRAKE SHAFT BEFORE THE SHAFT IS FITTEDBETWEEN THE 'V' HANGERS.

FIG 5

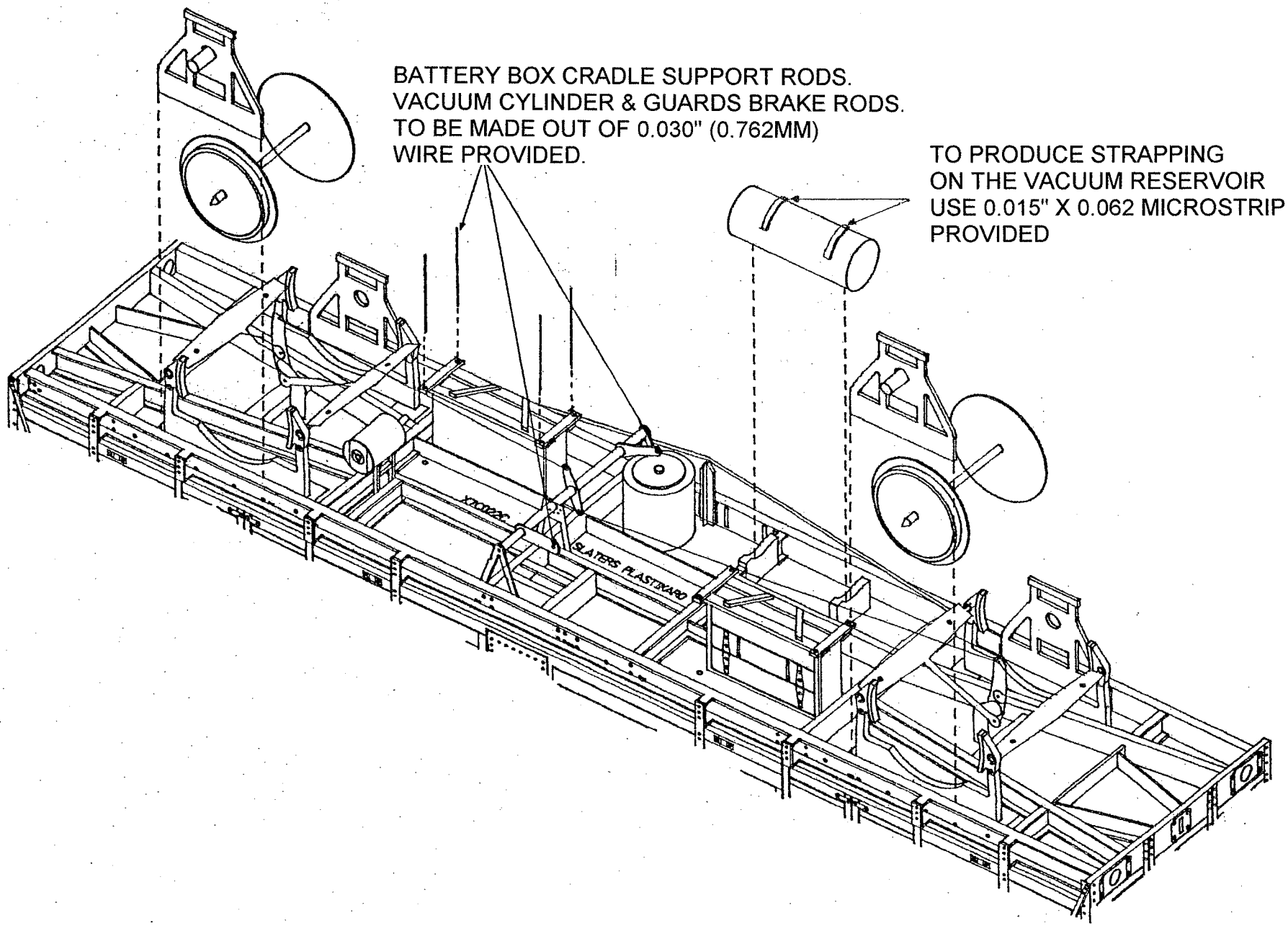
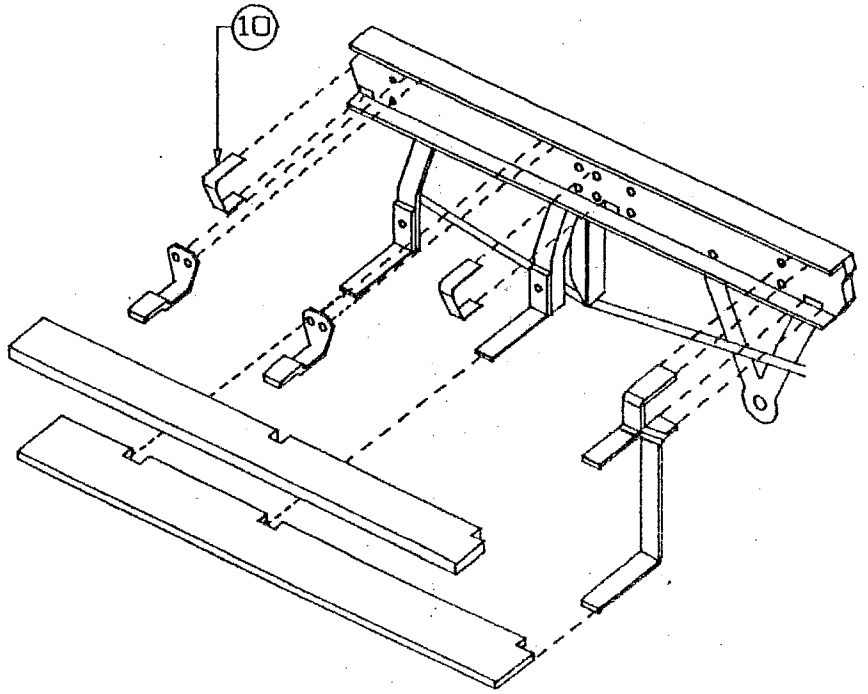
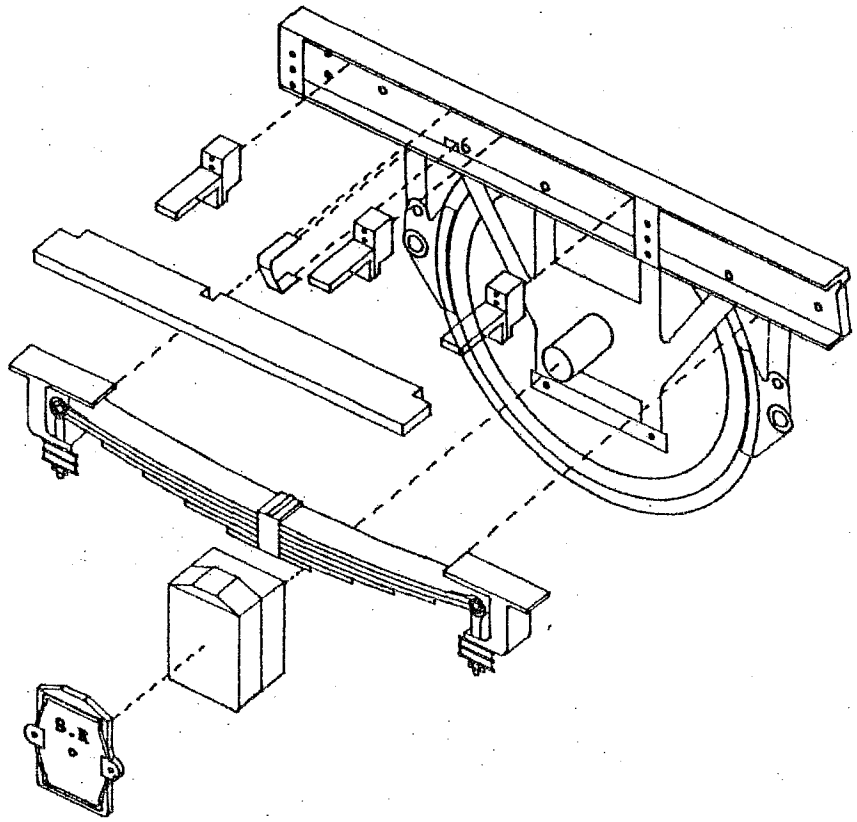

BATTERY BOX CRADLE SUPPORT RODS.
VACUUM CYLINDER & GUARDS BRAKE RODS.
TO BE MADE OUT OF 0.030" (0.762MM)
WIRE PROVIDED.
TO PRODUCE STRAPPING
ON THE VACUUM RESERVOIR
USE 0.015" X 0.062 MICROSTRIP
PROVIDED
SLATERS PLASTMARD

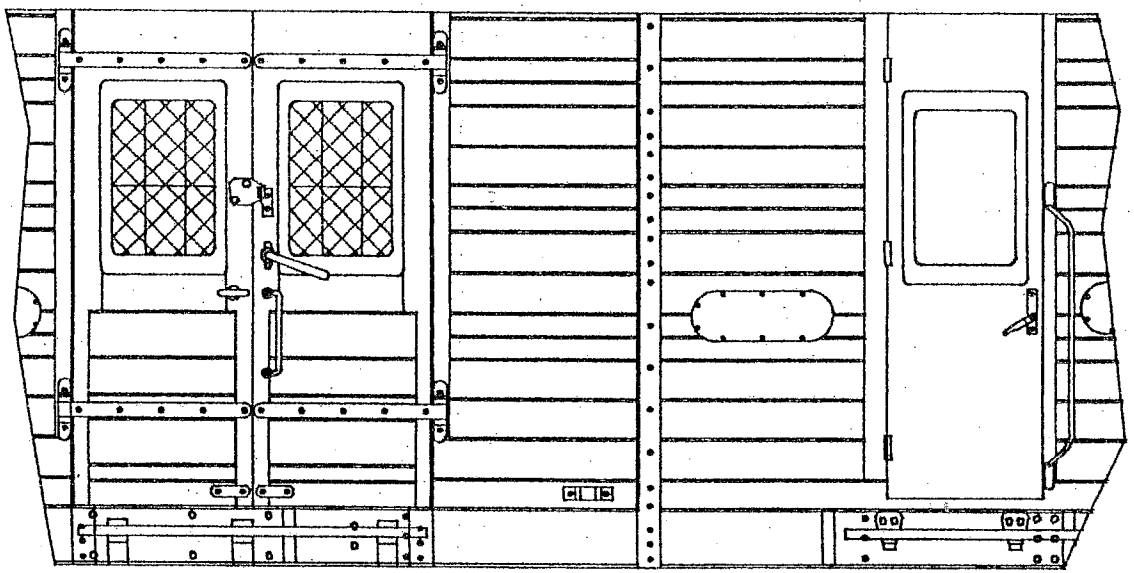
FIG 6

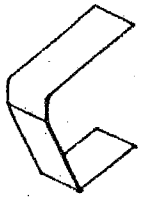
GUARD DOOR STEP BOARD ASSEMBLY





GUARD DOOR & DOOR DETAIL LOCATIONS

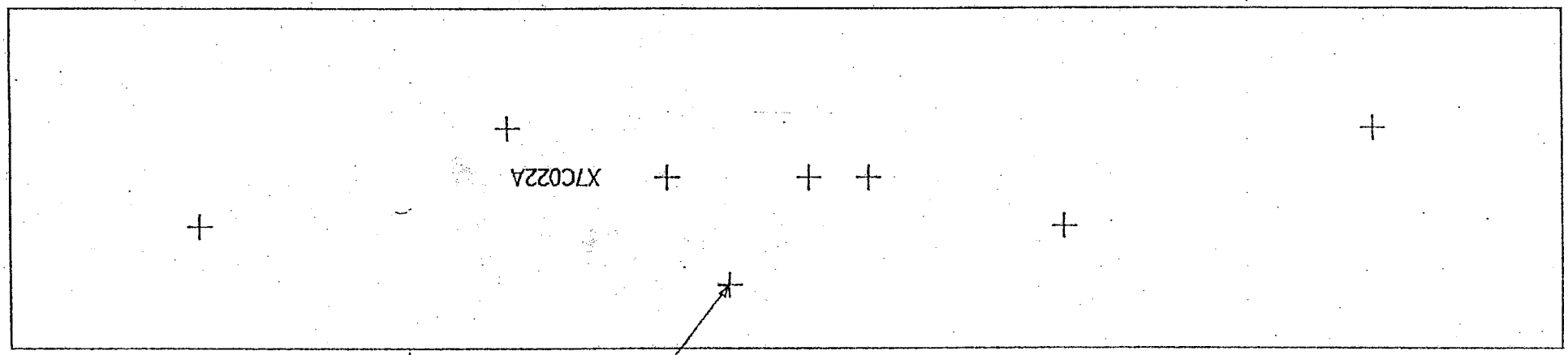




FOLD PART NO. 10 AS SHOWN
YOU WILL FIND THAT THERE
ARE RESESSES ON THE SOLEBAR
WHICH THESE PLUG INTO.
THERE ARE FOUR OF PART NO. 10
PER SIDE, THE ETCH IS SUPPLIED
WITH TWO SPARE.

FIG 7

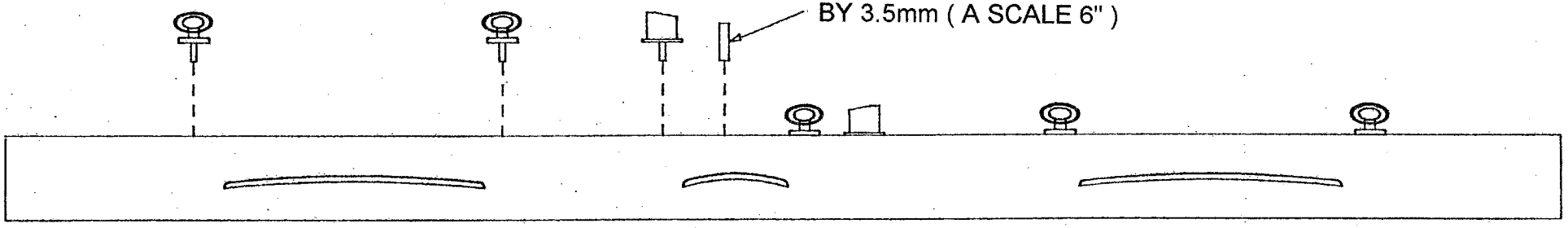
DRILL ALL POINTS (+) USING
A NO. 53 DRILL (1.5MM)



PLAN VIEW

STOVE PIPE CHIMNEY OPTIONAL
(REFER TO HISTORICAL NOTES)

CHIMNEY TO BE MADE OUT OF
3/32" TUBE. THIS CHIMNEY IS
OPTIONAL. HOWEVER IF FITTED
THE CHIMNEY SHOULD STICK OUT
BY 3.5mm (A SCALE 6")



SIDE VIEW

THIS IS A SCALE DRAWING AND CAN BE USED
AS A VISUAL LOCATION FOR THE RAIN STRIPS

FIG 8