GW. "EITHER SIDE" BRAKE GEAR DETAILS

MAT .004" COPPER STRIP.

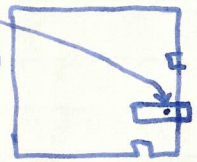
3 OR 4 OFF PER BRAKE GEAR.

① CUT COPPER STRIP TO 10 m/m WIDE & M.O. 1 m/m WIDTHS.

② BEND WITH FINGERS ROUND BRASS PLATE JIG (.015" BRASS) & TAP END FLAT WITH HAMMER THEN STROKE LEGS OF BRACKET WITH D.B. PLIERS TO FLATTEN

③ PLACE ON PLATE JIG & HOLD UP AGAINST JIG WITH 6" RULE & PRICK IN CENTRE OF HOLE WITH GRAM NEEDLE

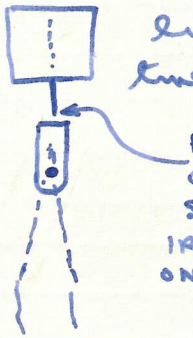
④ DRILL 77 HOLE (.018") TURN OVER & REPEAT FOR OTHER SIDE



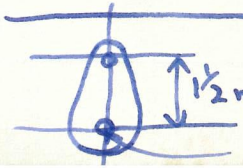
⑤ PRESS GRAM NEEDLE HARD ON END POP. & START DRILLING WITH 80 TO FORM CENTRE DRILL. WHEN ESTABLISHED, LIFT BKT SLIGHTLY AWAY FROM BRASS JIG & DRILL THRO' STILL WITH 80 DRILL. OPEN OUT HOLE WITH 77 (.018")

SOLDERING .015" BRASS WIRE TO ABOVE

① PLACE .015" Brass Wire between 2 heavy metal blocks:- and bring forward the link (indicated) with tweezers as sketched.

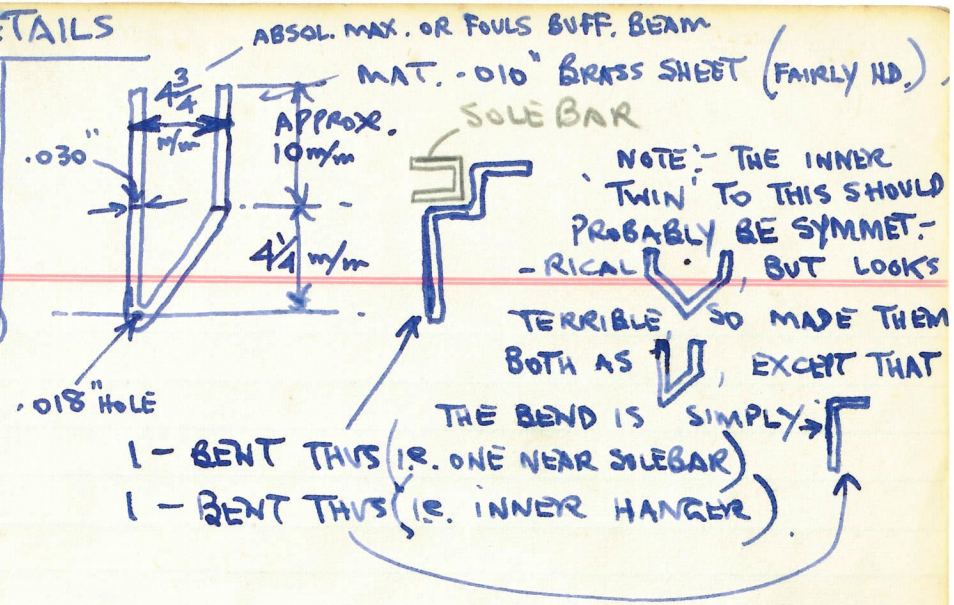


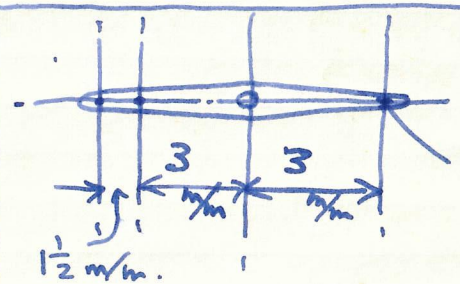
FLUX HERE & SOLDER HERE, GETTING MINIMUM OF SOLDER INSIDE (MAKE SURE SOLD. IRON HAS PRACT. NIL SOLDER ON IT.)



.010" BRASS

HOLES TO CLEAR .015" BRASS WIRE.

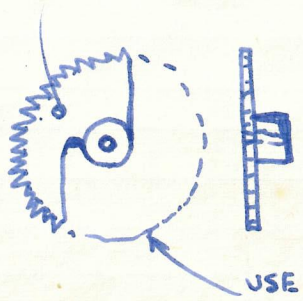




.010" HD BRASS

ALL HOLES FOR .015" BRASS WIRE

DRILL FOR .015" BRASS WIRE

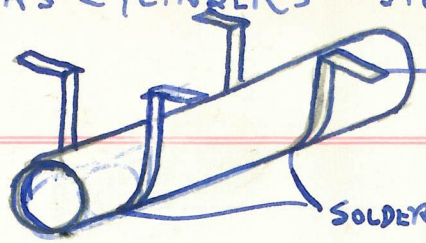


USE 5 m/m DIA. CLOCK WHEEL & FILE AWAY SURPLUS AS SHOWN.

SAY NOT MUCH BIGGER THAN .015" BRASS WIRE

WITH BUSS GIVING A SMALL HOLE

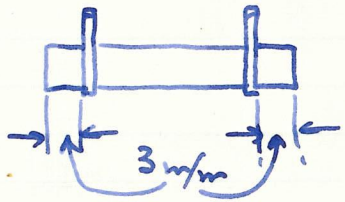
GAS CYLINDERS SIPHON 'C' 1962.

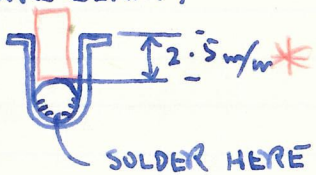


CUT FROM .010" HD BRASS STRIP APP. .025" WIDE × 1¼" LONG.

① CUT 5 m/m WOOD DOWEL × 27 m/m LONG.

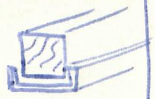
② CUT .008" THK COPPER STRIP × 28 m/m WIDE × .645" LONG (MAX.) & ROLL ROUND WOOD. & SOLDER ALONG SEAM.





* PLACE WOOD BLOCK INSIDE (MARKED OFF SUITABLY TO GIVE 2.5 m/m & BEND EACH OF THE 4-LUGS IN TURN TO GET SAME DEPTH (WITH D.B. PLIERS).

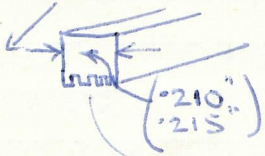
① CUT PIECE OF ·005" COPPER STRIP. TO :-
68·25 m/m × 7 m/m (FULL) WIDE

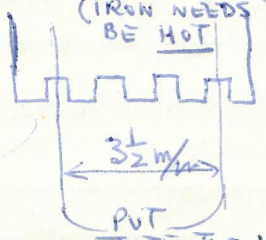


② BEND UP EDGES ON WOODEN STRIP JIG
(WOOD STRIP IS ·210" WIDE)
BY "SIGHTING" WOOD IN CENTRE OF COPPER STRIP & BEND UP USING 1ST, EXACTO & THEN RULE OR PINION DRIVER.

③ PLACE ⊔ CHANNEL ON JIG FOR SOLDERING & THREAD 4 COPPER WIRES IN HOLES & PULL TIGHT (·018" DIA. IN SUIT CASE CONTG NS WIRE)

④ USING WOODEN "GUIDE" SOLDER WIRES IN POSITN (IRON NEEDS TO BE HOT

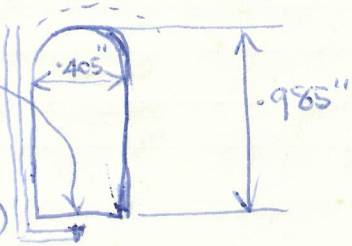




METHOD
1. SCRIBE WITH EXACTO
2. DEEPEN & WIDEN WITH GRAM NEEDLE
3. FILE WIDER & DEEPER WITH 3-CORNER FILE

PUT THESE TWO IN 1ST THEN EVENLY SPACE THE INNER TWO

⑤ SNIP WIRES & FILE CLEAN. THEN BEND ROUND WOOD FORMER STARTING AT BOTTOM CENTRE & FINISHING AT BOTTOM.



⑥ AFTER TIDYING UP THE FLANGE ALL ROUND BY PLACING (WHILST ON JIG) ON STEEL BLOCK & STROKING WITH PINION DRIVER, SOLDER TOGETHER AT BTM.

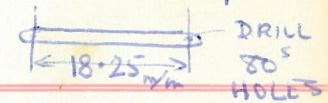
⑦ DRILL 4 - N° 80" HOLES EACH SIDE BY SIGHTING POSITION FROM PENCIL MARKS ON THE FORMING JIG & PRICK IN WITH GRAM NEEDLE.

SCISSORS ①

CORRIDOR CONNECTIONS

ALL METAL

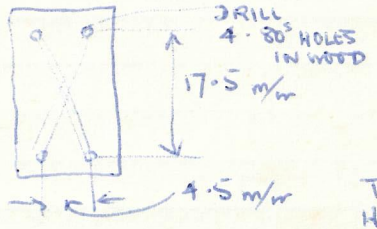
USING ·005" × 1¾" WIDE STRIP OF BERYLIUM COPPER (HARD)
CUT INTO APPROX ·025" WIDE STRIPS × 1¾" LONG (WITH GUILLOTINE)
THIS MAKES 2 - LENGTHS



② SOLDER 2 SMALLEST PINS IN POSITION & SNIP OFF SURPLUS LENGTH TO APPROX ⅛" LONG

③ TIN ONE OF THE TWO STRIPS IN CENTRE

④ PLACE BOTH STRIPS IN WOOD JIG & SOLDER TOGETHER AT CENTRE & CLEAN UP SURPLUS SOLDER WITH FILE.



THEN DRILL 80" HOLE THRO' BOTH IN CENTRE

⑤ POSITION IN 4 · HOLES ON CORRIDER CONNECTION & SOLDER ON INSIDE & FILE UP SMOOTH INSIDE TO REMOVE SURPLUS SOLDER

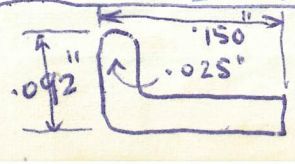
⑥ DRILL THRO' THE CENTRE HOLE & FIT & SOLDER N° 5 PIN IN POSITION

CANOPY ① USING ·005" COPPER STRIP, CUT PIECE
5·5 m/m WIDE × 16·5 mm LONG

② BEND EACH END ROUND A ROUND TAPER FILE TO FORM KINK & THEN FORM ON EXISTING WOODEN JIG

③ GLUE TO CORR. CONN. USING EVO-STICK

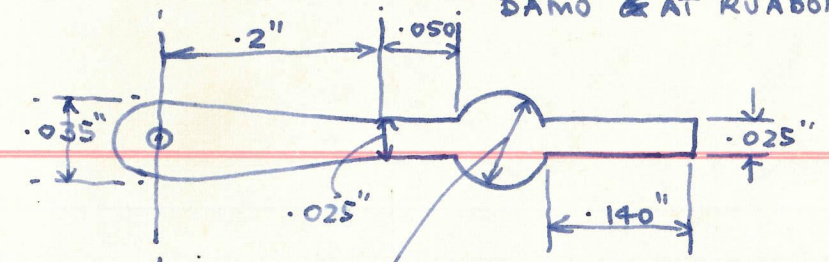
STEP CUT ·005" COPPER STRIP TO 5·5 m/m WIDE × 9·25 m/m LONG & STICK IN POSITION WITH EVO-STICK



USED ·003" BRASS (PROB ·005" Better ¼ to scale)

BRAKE HANDLES

PUNCH MADE TO :- (BASED ON DIMS. TAKEN FROM DAMO & AT RUABON.



~~·025"~~ COPPER (MUST TAKE SOLDER)
PROVED TOO WEAK EVEN WHEN TINNED BEHIND WITH SOLDER TO STRENGTHEN — EVENT. USED ·008" & TINNED, THE BACK FACE & BENDS.

OVAL BUFFERS 40'. SIPHONS.

USE K's ROUND COACH BUFFERS & FILE TO :-

Then reduce (file) 4 corners to make an oval.
Generally file down body to reduce to slimmer proportions.

FILE SQUARE OR SLIGHTLY RECTANGULAR USING PIN CHUCK WITH SQUARE HOLDER

SMALL HANDLES ON 40'. SIPHON

SEE BELOW LATER METHOD

(1) USE ·018" NS (SOFTENED IN GAS) & EMERY DOWN TO ·012"
(2) BEND ROUND 6" RULE (APPROX ·035")
(3) THEN COMPLETE BENDING USING DUCKBILL PLIERS (GUESSING) DONT EXCEED MAX. OF 3·5 m/m
(4) PLACE HANDLE IN 2 HOLES IN SCRAP PLY & FILE (USING FILE) TWO FLATS ALSO FILE TOP OF HANDLE

NOTE :- KEEP 'DEPTH' AS SMALL AS POSSIBLE

USE ·013 WIRE FROM JIM STOKES (OFF FIRE ELEMENTS.
(PROTOTYPE HANDLE PROB. 3/4"DIA (·010") BUT LOOKS FLIMSY.
(1) BEND WITH DUCK BILL PLIERS AS SHARP A CORNER AS POSS. USING NEW 12" RULE (·042").
THEN PLACE IN ALEC'S ECLIPSE VICE ONLY JUST INSIDE & BEND BOTH ARMS BACK & HAMMER FLAT.
THUS
REMOVE FROM VICE & BEND WITH DUCK BILL PLIERS, GUESSING TO COME TO 3·5 mm MAX.
PRESS IN HOLES IN SCRAP PLY WOOD & FILE TO GIVE IMPRESSION OF LUG.
DRILL 80' Hole in body & press handle home (measure centres of holes FROM INDIVIDUAL HANDLES.

LUGGAGE LABEL CLIP ON BOARD.

PUNCH FROM ·008" COPPER STRIP.

(1) CEN. POP BY SIGHT WITH G. NEEDLE IN TWO BTm. CORNERS.
NOTE :- ROUNDED SIDE PUT OUT OF SIGHT ON VEHICLE (I.E. UNDERNEATH)
(2) HOLDING DOWN WITH 6" RULE, DRILL 2 - 80' HOLES & FILE AWAY BURRS CAUSED THEREBY (UNDERNEATH)
(3) BEND ·006" FINE PHOS. BR. WIRE APPROX. SAME CENTRES & BEND THUS. THEN ANOTHER BEND THUS SO THAT THE CLIP APPROX EXTENDS TO TOP OF PLATE

NOTE ·006" BRONZE WIRE IS BRITTLE (PASS THRO GAS FLAME QUICKLY TO STOP FRACTURING.)

ASSEMBLY (1) STICK PLATE IN POSITION ON BODY WITH EVOSTICK.
(2) WHEN THOROUGHLY SET, EXTEND THE 2 - 80' HOLES INTO THE BODY APPROX 1/8" DEEP.
(3) USING EVOSTICK, PUSH CLIP INTO HOLES

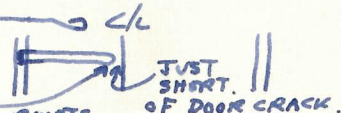
'END' DETAILS ON 40' SIPHON F. SEE ALSO GUSSETTS

LONG DOOR HINGES (USE HAMBLINGS BRASS BOILER BANDS)

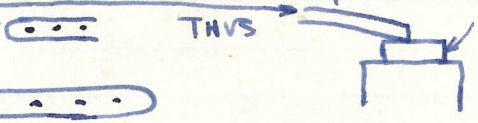
(1) BEND ONE END THUS:-

(2) PLACE ON VEHICLE & CUT TO LENGTH & RADIUS END

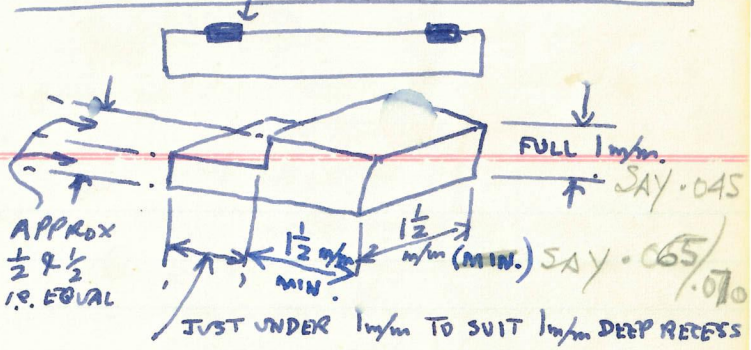
(3) APPLY BLUE INK & M.O. C/L OF PLANKS FOR RIVETS.



(4) CENTRE POP USING NEW SHARP PUNCH & .098" DOLLY WITH ADJUSTING ARM RESTING ON TOP OF DOLLY TO GIVE ½ WAY ON HINGE THUS



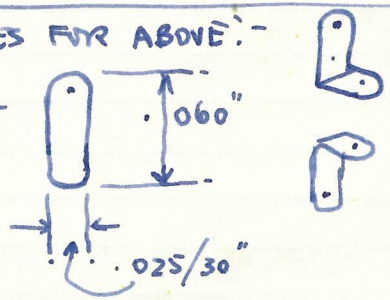
WOODEN BLOCKS PROTRUDING ON END FLAPS



USE STRIP WOOD SECTION:- APP. .070"/.075" SQUARE SECTION. (HOBBY'S OR MODEL SHOP. MANCHESTER)

SMALL HINGES FOR ABOVE:-

BLANK SIZE:- .005" ALUM. STRIP.

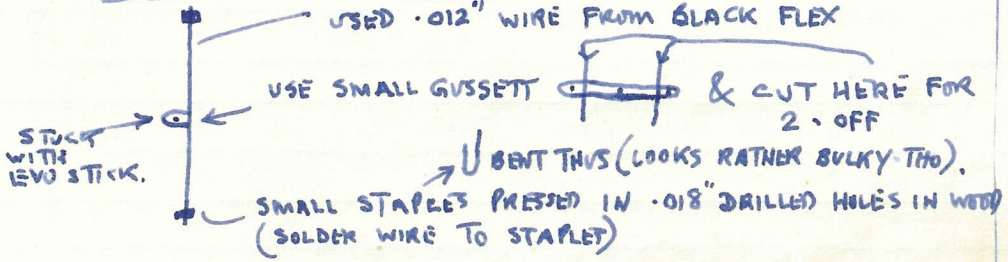


AFTER BLANKING, PLACE WITH RADIUS SIDE UPWARDS, & PRICK IN ONE RIVET WITH PIN HELD IN PINCHVEK (IT THEN STICKS IN PIN) - LIFT UP & POSITION TWEEZERS:-

THEN BEND AT RIGHT ANGLES ON THUMB NAIL.

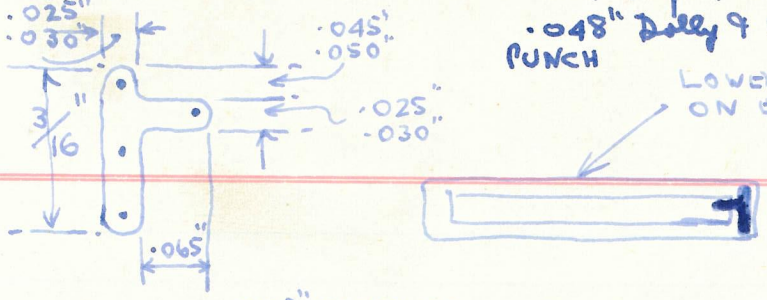
½ CIRCLE (NO MORE) OR STICKS OUT TOO FAR IT.

DOOR RUD ON END DOORS (40' SIP)



VARIOUS GUSSETS ON 40' SIPHON

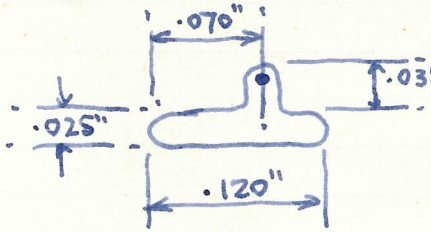
PUNCHES MADE:-



Rivets put in with .048" Dolly & NEW SHARP PUNCH

LOWER FLAPS ON END DOORS

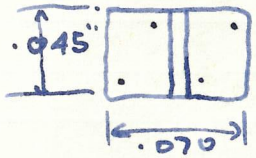
USED AT TOP OF END DOORS:-



COULD PROBABLY BE B LONGER WITH ADVANTAGE

RIVETS PUT IN WITH .048" DOLLY & NEW SHARP PUNCH

DOOR HINGES ON 40'. SIPHON F



ON VEHICLES THESE HAVE BEEN MEASURED TWICE AT 5¼" LONG X 3¼" i.e. .069" x .043" SAY .070 x .045"

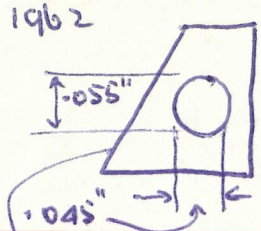
CHECK WITH MY PUNCH.

RIVETS PRICKED WITH NEEDLE IN PIN CHUCK WHILST IN LEAD SHEET

.005" ALUM. STRIP.

NOTE ½ R.H. HINGES & ½ L.H. HINGES i.e. ∴ & ∴

40' SIPHON 1962

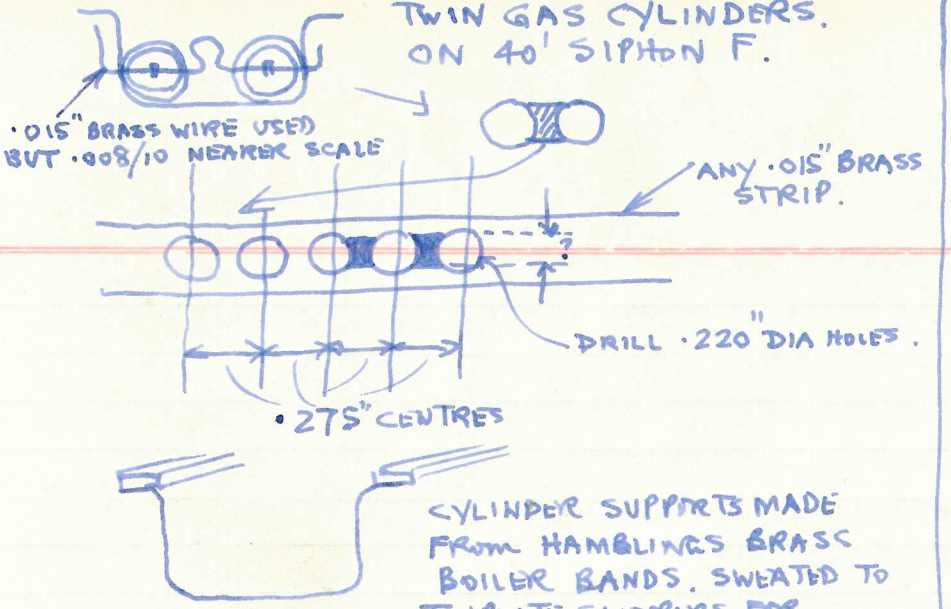


STAMP OUT OF .010/.011" TINNED COPPER STRIP x 3/4" WIDE

Whilst stamping is in lead sheet drill (start) on centre pop with approx .020/.022" DRILL & then drill thro' with .040" to .042" DRILL. Remove from lead & file off burr at back & then flatten on steel block by rubbing with tweezers. Finally file hole slightly on front with approx 1/8" DIA DRILL

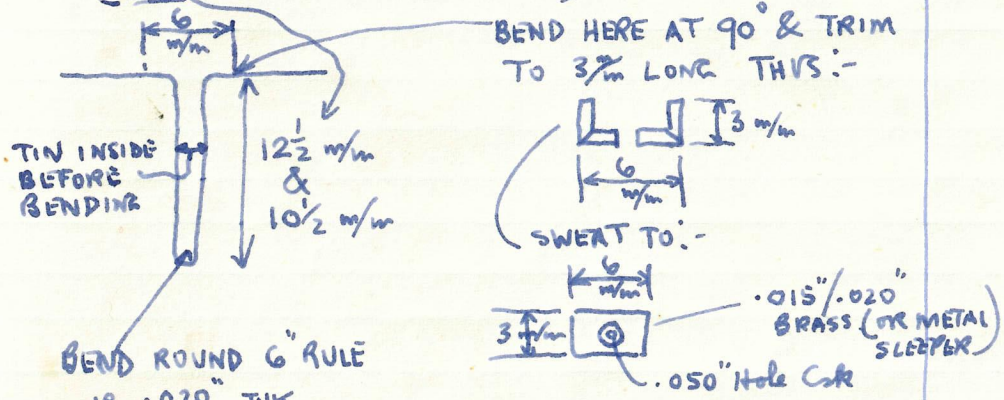
Strike on with EVOSTICK after "try out" (filing of some edges necessary to get all four plates approx level on each side of vehicle.

TWIN GAS CYLINDERS. ON 40' SIPHON F.



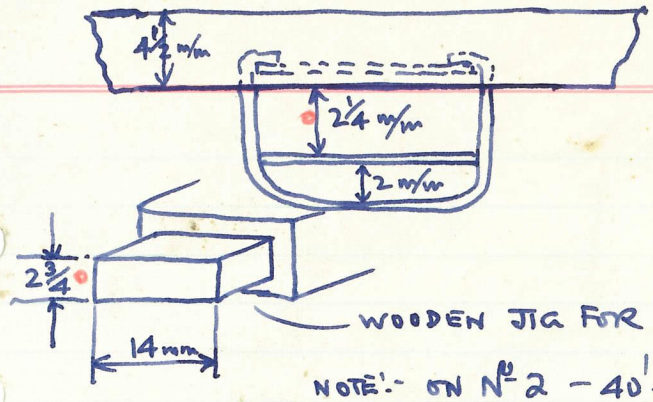
CYLINDER SUPPORTS MADE FROM HAMBLINGS BRASS BOILER BANDS. SWEATED TO TINPLATE SLEEPERS FOR SCREWING INTO FLOOR OF VEHICLE

BRAKEROD SUPPORTS 40' - SIPHON F.
(TWO DIFFERENT LENGTHS)



·008" x 3/8" BRASS STRIP. M.O. IN ·020"/·025" WIDTH & CUT STRIP IN LONG LENGTHS.

9'- VOLUTE BOGIES.

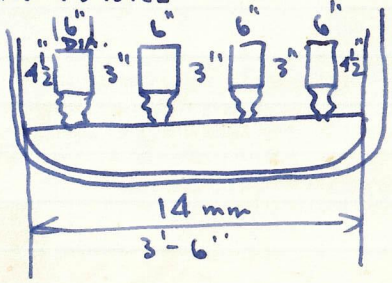


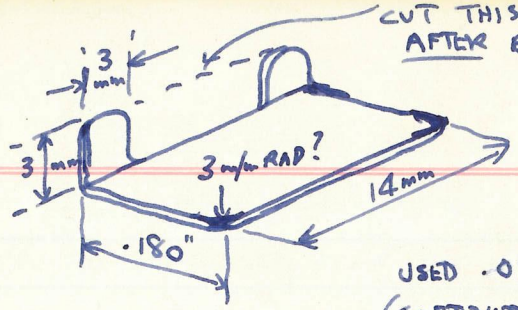
WOODEN JIG FOR SOLDERING UP.

NOTE:- ON Nº 2 - 40'- SIPHON I USED THIS JIG ALSO FOR SOLDERING SUB UNIT (ie BOLSTER) TO SIDE FRAMES, BUT "CRESCENT" CAME TOO LOW IE. TOO NEAR THE TRACK

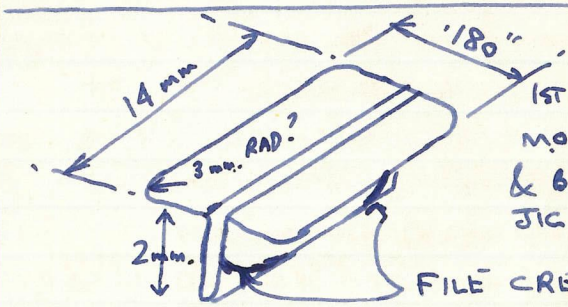
REASON PRESUMABLY 2¾ V 2¼ m/m

WATCH IN FUTURE





USED ·014" X 2" HARD BRASS STRIP. (SOFTENED ON GAS STOVE)



1ST BEND INTO A U THEN M.O. 2m/m FROM BTM EDGE & BEND TOP FLAPS IN BRASS JIG.

FILE CRESCENT SHAPE

USED ·014" x 2" HARD BRASS STRIP (SOFTENED)

BOLSTER VOLUTE SPRINGS.

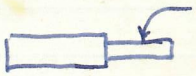
USE ·004" x 1" COPPER STRIP CUT 1¼ mm WIDE X FULL 1" LENGTH. KINK END ← & WIND ON MANDRELL

·040" DIA. SAWCUT APPROX CENTRE WITH 80T BLADE X APP. 1/16" DEEP.

AXLE BOX SPRINGS

·004" COPPER STRIP. CUT ½" LONG X ¾ m/m WIDE

KINK THUS ← & THEN WIND ROUND MANDREL.

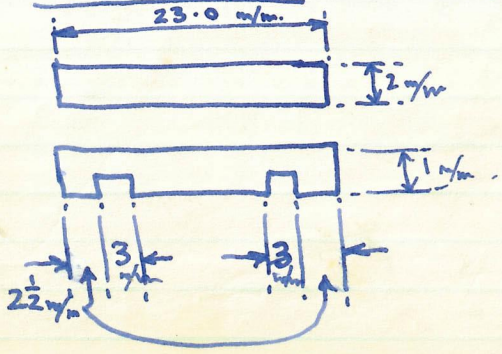


TURN DOWN TO ·060" DIA. THEN FLATTEN TO ·045"

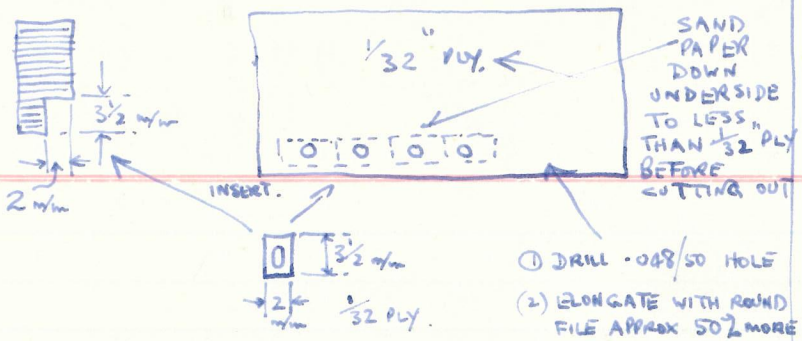
SAW SLOT WITH 80T. BLADE

BOGIE SPACERS

MAT. 2 m/m x 1 m/m. BRASS SECTION. (ERGS.)



40' BUGIE SIPHON F

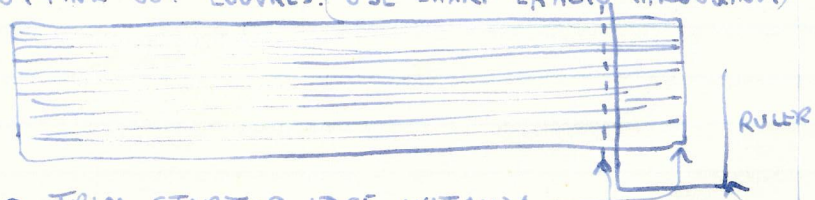


① DRILL .048/50 HOLE

② ELONGATE WITH ROUND FILE APPROX 50% MORE IN ONE DIRECTION

③ MARK OFF IN PENCIL 3½ x 2 & CUT OUT WITH SHARP EXACTO

CUTTING OUT LOUVRES. (USE SHARP EXACTO THROUGHOUT)



① TRIM STARTING EDGE INITIALLY

② MARK OFF IN PENCIL (WIDTH OF CUT) BY PLACING ON SIPHON SIDE & M. OFF CAREFULLY.

③ CUT TO WIDTH (WITH RULER PROTECTING PORTION TO BE USED)

④ TRIM EDGE TO REMOVE BURRED LOUVRES (ONLY NEEDS ABOUT 1 m/m) WITH RULE PROTECTING AGAIN THE LOUVRES TO BE USED

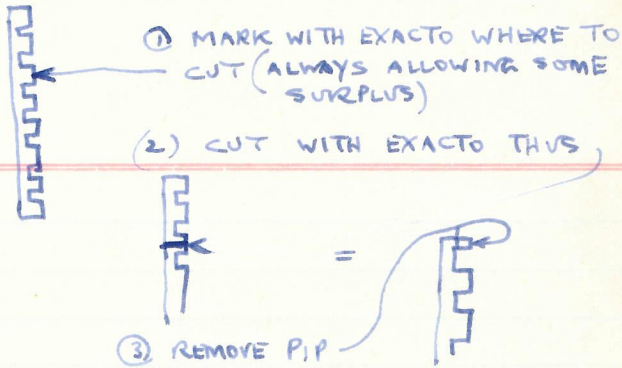
⑤ PROCEED AS ABOVE

REDUCING WIDTH (1/32" to something less)

Rub finished piece on large rough file.

NOTE: Make sure when fitting louvres that the two top edges are free from glue →

CONT'D / FOR GETTING CLEAN & CONSISTENT 'TOP' LOUVRE NR ROOF, PROCEED AS FOLLOWS.



① MARK WITH EXACTO WHERE TO CUT (ALWAYS ALLOWING SOME SURPLUS)

② CUT WITH EXACTO THUS

③ REMOVE PIP

④ THEN FILE TOP EDGE SO THAT ALL LOUVRES LINE UP LEVEL AT WAISTE BEFORE GLUEING.

=

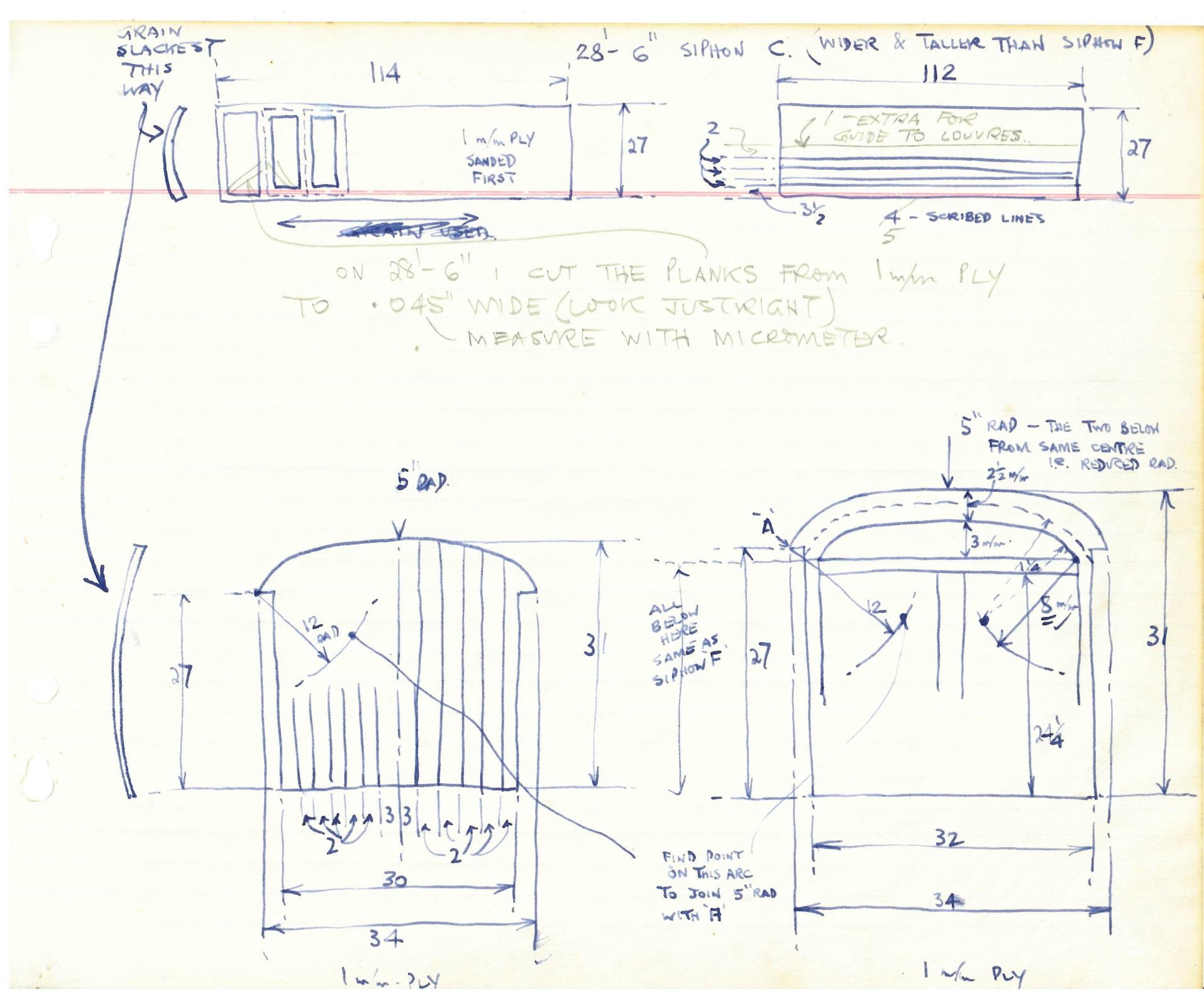
FRAMES STRIP FOR BUGIE SIPHONS.

CUT FROM 1 m/m PLY USING  TO MARK OUT WIDTH OF EACH ONE (THEN CUT CLEAN WITH EXACTO BLADE & SAND UP WITH FINE GARNET PAPER (THEN FILL WITH HUMBROL WOOD GRAIN FILLER)

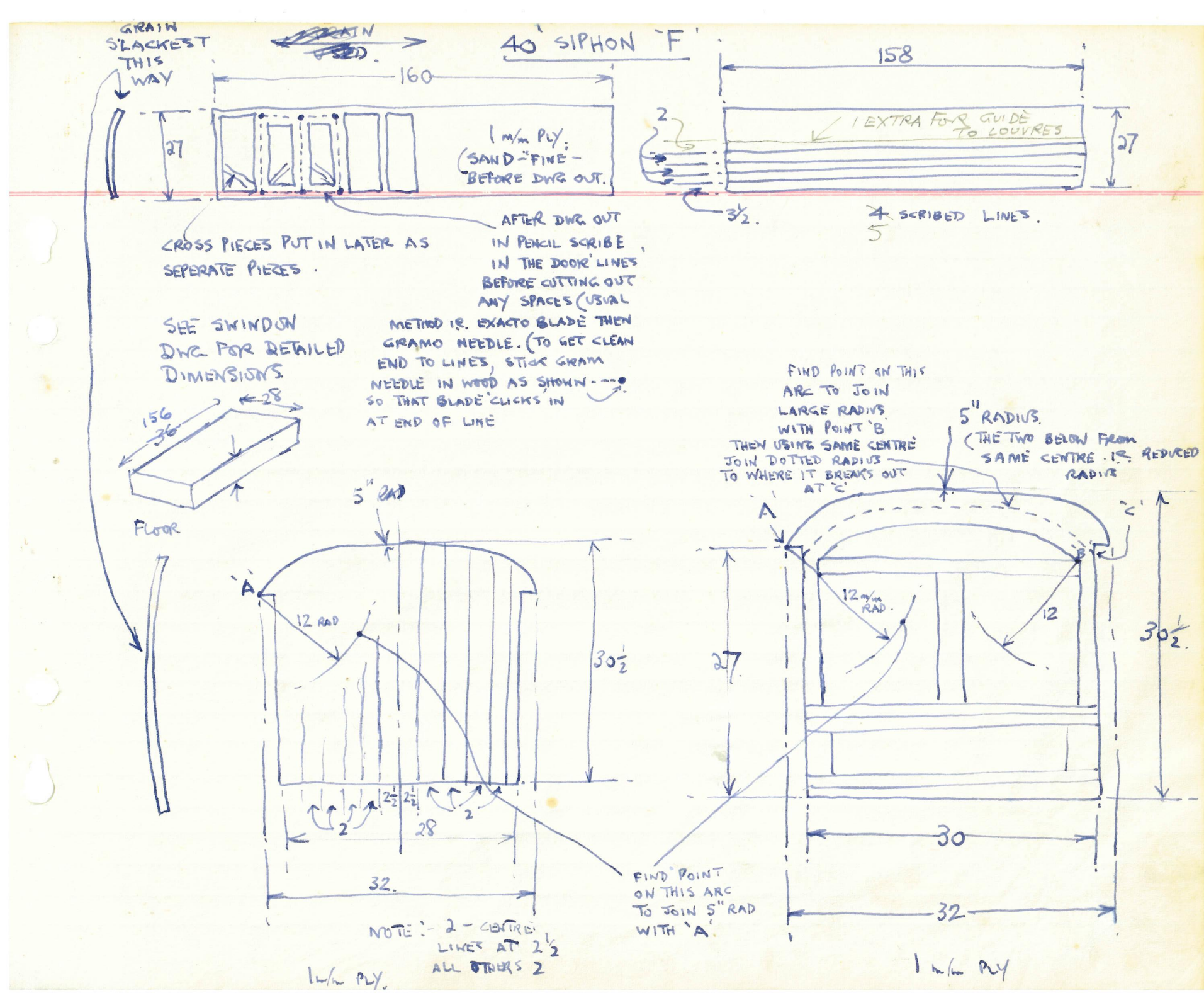
NOTE / Those on Siphon F looked a trifle wide with the above tool set at :-

$\frac{1}{20}$" (i.e. .050") POSSIBLY .040" BETTER (i.e. 1 m/m = 3" PLANKING)

NOTE:- ON SIPHON C, SIMPLY MARK OFF JUST OVER 1 m/m WIDE & CUT TO STRIP LENGTH WITH EXACTO & SAND TO FIN. WIDTH OF .045" (MIKED) JUST


GRAIN SLACKEST THIS WAY
28' - 6" SIPHON C. (WIDER & TALLER THAN SIPHON F)
114
1 m/m PLY SANDED FIRST
27
112
1 - EXTRA FOR GUIDE TO LOUVRES.
2
3½
4 - SCRIBED LINES
5
ON 28' - 6" I CUT THE PLANKS FROM 1 m/m PLY
TO .045" WIDE (LOOK JUSTRIGHT)
MEASURE WITH MICROMETER.
5" RAD
12 RAD
27
31
2
3
3
2
30
34
1 m/m PLY
5" RAD - THE TWO BELOW FROM SAME CENTRE I.E. REDUCED RAD.
2½ m/m
A
3 m/m
1¼
12
8 m/m
ALL BELOW HERE SAME AS SIPHON F
27
31
24¼
32
34
FIND POINT ON THIS ARC TO JOIN 5" RAD WITH A
1 m/m PLY

40' SIPHON 'F'


GRAIN SLACKEST THIS WAY
GRAIN
160
27
1 m/m PLY. (SAND FINE BEFORE DWG OUT.
158
2
1 EXTRA FOR GUIDE TO LOUVRES
27
3½.
4 SCRIBED LINES.
5
CROSS PIECES PUT IN LATER AS SEPERATE PIECES.
AFTER DWG OUT IN PENCIL SCRIBE IN THE DOOR LINES BEFORE CUTTING OUT ANY SPACES (USUAL METHOD IS. EXACTO BLADE THEN GRAMO NEEDLE. (TO GET CLEAN END TO LINES, STICK GRAM NEEDLE IN WOOD AS SHOWN - - - • SO THAT BLADE CLICKS IN AT END OF LINE
SEE SWINDON DWG FOR RETAILED DIMENSIONS
156
36
28
FLOOR
5" RAD
A
12 RAD
30½
2½
2½
2
2
28
32.
NOTE :- 2 - CENTRES LINES AT 2½ ALL OTHERS 2
1 m/m PLY.
FIND POINT ON THIS ARC TO JOIN LARGE RADIUS WITH POINT 'B' THEN USING SAME CENTRE JOIN DOTTED RADIUS TO WHERE IT BREAKS OUT AT 'C'
5" RADIUS. (THE TWO BELOW FROM SAME CENTRE IS REDUCED RADIUS
A
B
C
12 m/m RAD.
12
27
30½
30
32
FIND POINT ON THIS ARC TO JOIN 5" RAD WITH 'A'
1 m/m PLY

GUSSETS FOR SYPHONS

ONLY 3 PUNCHES NEEDED FOR SIP. C & F.

① PUNCHES MADE FROM ·1875" DIA M.S. ROD IN APP. 6" LENGTHS IN SCRAP BOX IN STAIRS CUPBOARD. (HAVE A FLAT ON END FOR RADIO KNOB.

(A) NO HARDENING OF PUNCH NEEDED.
(B) USE 'STONE' FOR FINISHING AFTER SMOOTH FILE.
(C) WHEN PUNCHING OUT; MOUNT PUNCH IN LARGE HEAVY STEEL ADAPTOR & GIVE SHARP BLOW WITH HEAVY HAMMER ONTO 1/16" APP. SHEET LEAD.
MATERIAL USED:- VERY SOFT ALUM. STRIP. 1/4" X ·005")
(D) WHEN PUNCHING OUT, EXAM CAREFULLY FOR HEAVY BURR ON ANY SIDE BEFORE PROCEEDING FAR & RE-STONE THE PUNCH TO REMOVE AS REQ'D. (SLIGHT BURR NOT VERY IMPORTANT AS REMOVED IN UNDER RIVETTING OPERATION.
(SEE OPPOSITE)

PUTTING RIVETS IN GUSSETS

① PLACE GUSSETT ON NICE FLAT PIECE OF TOOL STEEL. (BURR ~~SIDE~~ EDGES TO TOP. i.e. ROUND EDGES BELOW.

② PRESS DOWN WITH HANDLE OF TWEEZERS (OR SIM. SMOOTH SURFACE) & STROKE ACROSS GUSSETT TO FLATTEN SAME & REMOVE ANY BURRS.

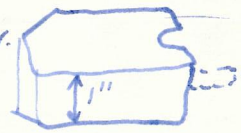
③ PICK UP & INSERT IN TWEEZERS WITH ANY GUSSETT ARM FACING TOWARDS YOU ie. ⌐ & PRESS IN RIVET.
NOTE:- PUNCH PRESSED IN WITH RADIUS EDGE AT TOP SO THAT RIVET HEAD APPEARS ON FLAT (BURR) SIDE. THUS:-

. MAKE SURE THAT RIVETS ARE AS NEAR TO END AS POSS. & IN CENTRE THUS:-

PRESS PUNCH FIRMLY DOWN FOR EACH ONE TO GET RIVETS ALL THE SAME.

ANY DOUBTFUL ONES, SCRAP IMMEDIATELY, TO AVOID SORTING OUT LATER (IN FACT, WHEN PLACED ASIDE, SHOULD BE ACCEPTED & READY FOR STICKING IN PLACE.

④ AFTER ALL RIVETS ARE IN POSITION, PLACE GUSS. ON SAME PIECE OF FLAT TOOL STEEL (RIVETS UPWARDS) & PLACE SEMI-HARD PIECE OF RUBBER OVER & CLOUT FEW TIMES WITH HAMMER TO CLEAN UP & FLATTEN.



⑤ PLACE IN SAFE BOX WITH LID. CAREFULLY.

BEESON RIVETTER

NOTE:- PUNCH USED:- THE ONE FROM MMRS. SLIGHTLY BLUNTED & STAMPED 'OO'

BOTTOM DIE:- MMRS. SAMPLE WITH TOP P/P. OF ·0585" DIA.

NOTE:- IMPORTANT TO WATCH COMBINATION OF PUNCH & DIE AS SUBSTANTIALLY DIFFERENT SIZES & DEPTHS OF RIVETS COME OUT.

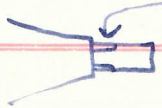
. USE OF GRAM. NEEDLE ALTHO CLEAN PRODUCED RIVET TO SMALL — ALSO DIFF. TO AVOID BREAKING T... ON LEAD SHEET.

PARTS FOR 6-4" DEAN BOGIES

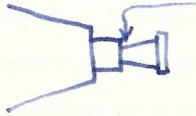
(BASED ON 1960 58-6" BOGIE BRAKE 3RD)

USE ⅛" DOWEL WOOD

① CUT TO ½" LENGTHS FOR CHUCKING IN WHEELBRACE.

②  USING ⅛" SQUARE FILE TURN AS SHOWN

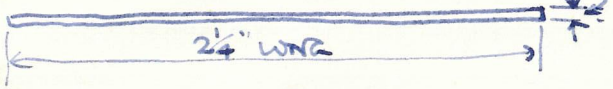
③  SAWCUT TO REMOVE SURPLUS & CENTRE WITH GRAM. NEEDLE & DRILL ½ WAY UP WITH ·023" DRILL TO SUIT HOUSEHOLD PIN.

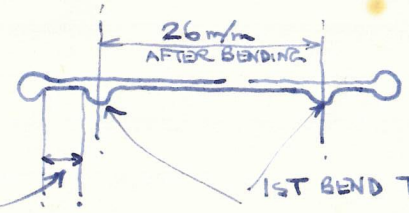
④  PULL OUT FROM CHUCK & SAW OFF DRILL ·023" HOLE TO MEET OTHER 1ST DRILLING.

⑤ Cole bottom HOLE TO SLIGHTLY HIDE PIN HEAD.

CROSS STAYS (USE ·010" HARD BRASS STRIP)

① CUT TO SIZE





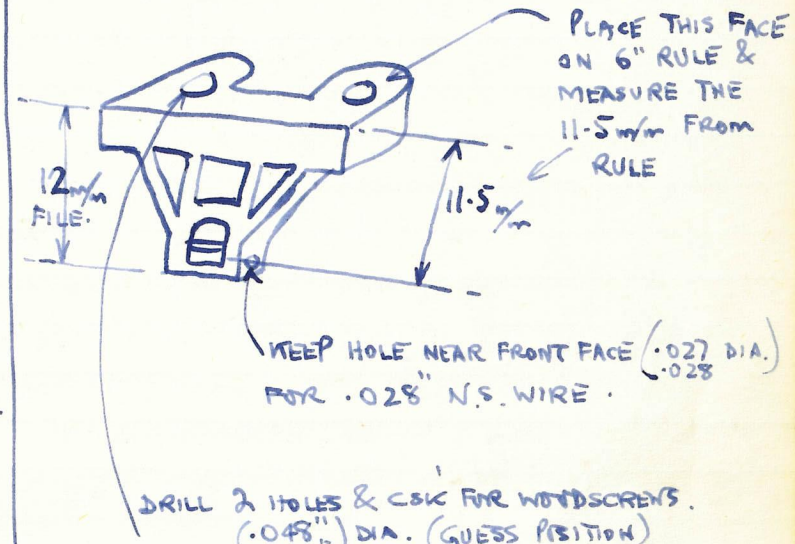
PLACE ROUND NOSE PLIERS HERE (PROTRUDING ABOUT ⅛" GIVES CORRECT DISTANCE) & BEND (i.e. START 1ST BEND)

THE "COMPLETE" BEND IS THEN PERFORMED USING ·028" N.S. WIRE.

'W' IRONS (1960 4 wheelers)

ROUGH CASTINGS FROM HOME MADE PLASTER MOULD

NOTE:- SEE LAST MOULD IS. IMPORTANT WHICH WAY ROUND FOR WITHDRAWING THE CASTING FOR BEST RESULTS.



FILE HEAVY CHAMFERS WHERE NECESSARY TO GIVE 'THINNESS' TO 'W' IRON.

DRILL HOLE IN AXLEGUARD FOR PECO BRASS BUSHES (?" FROM TOP FACE)

70' CHASSIS

I SECTION GIRDERS USE ·0075/8 COPPER STRIP.

BENT THUS:

3 – HOLES FOR 12 or 14 BA SCREWS & NUTS (TO HOLD TOGETHER WHILST SOLDERING TO QUEEN POSTS. (REMOVE SCREWS LAST OP.)

QUEEN POSTS

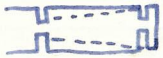
USE $\frac{1}{16}$" SQUARE BRASS ROD.

USE JIG FOR MARKING OFF WITH FRETSAW BLADE

OP 1 USING HAND DRILL FOR CHUCKING:–

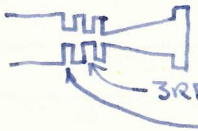
1ST CUT.

OP 2



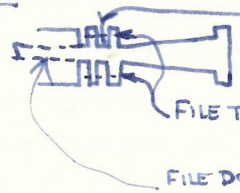
2ND CUT. & THEN FILE ANGLE

OP 3



3RD CUT & 4TH CUT

OP 4



USING SAW BLADE .012" WIDE X .027" APP. 54T. PER INCH.

REDUCE TO SUIT IN TIE ROD.

FILE THESE DOWN TO SUIT $\frac{1}{32}$" ½ ROUND TIE RODS.

FILE DOWN HERE & SAW OFF TO LENGTH

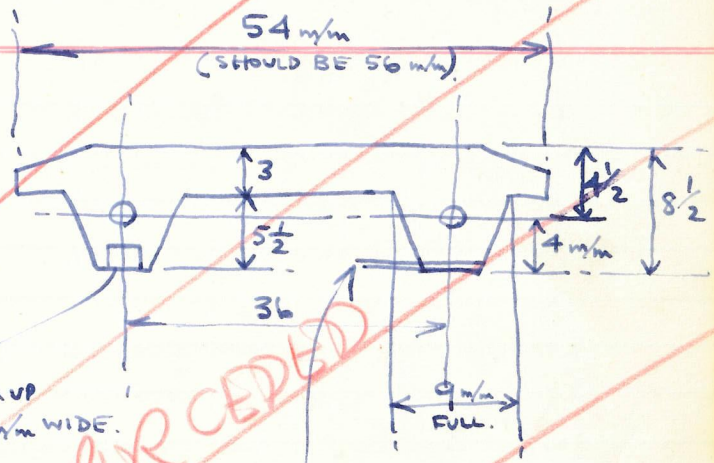
TIE RODS

USE $\frac{1}{32}$" ½ RD BRASS WIRE FROM EAMES. – SLIGHTLY HAMMERED FLAT. AND THEN A FEW STROKES OF FILE TO CLEAN UP.

9' AMERICAN EQUALIZING BOGIE

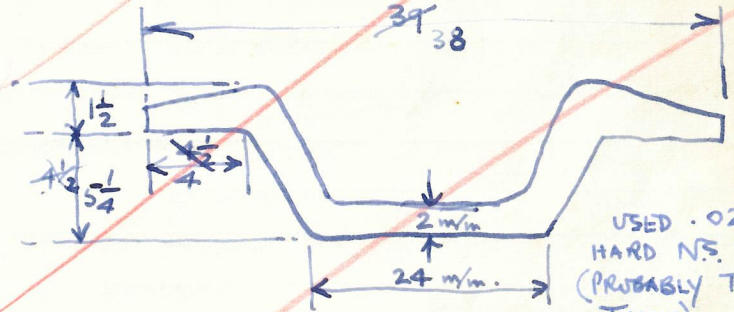
SEE 8' DITTO IN MREC. IN LATTER ½ OF 1960 NOV

AS FITTED TO MY 70' VAN (1960).



SUPERCEDED

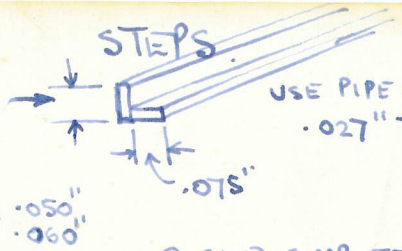
·024" WIRE TIE BAR (FLATTENED EACH END)



USED ·028" HARD N.S. STRIP (PROBABLY TOO THICK) (·015" MORE CORRECT?)

SEE MORE CAREFULLY PREPARED DRAWINGS & INFORMATION

STEPS



① SAND COMPLETE PIPE LIGHTER

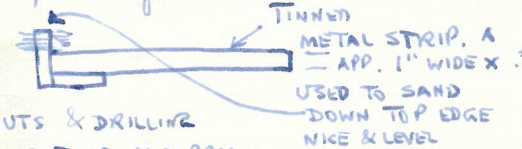
② CUT TO STRIP WIDTHS ABOVE & CLEAN UP WITH SAND PAPER

③ WITH PAPER ON LARGE GLASS SHEET. STICK DOWN ALL ·075" WIDTHS WITH CELLOTAPE. ALLOW SLIGHT ANGLE FOR APPLYING GLUE ≫.

④ APPLY GLUE TO BOTH PIECES & PRESS (STROKE) TOGETHER WITH 6" RULE ETC. UNTIL THE GLUE GETS HOLD. — NO WEIGHTS OR PRESSURE NEEDED OVERNIGHT.

DRILL AS NEAR TO BACK AS POSS. SO THAT THE TINNED WIRE DOESN'T SLIP OFF STEP SUPPORT. BEFORE SOLDERING. (ALSO SOLD. JOINT IS LESS NOTICEABLE)

DRILL 2 - №77 holes (·018") approx ·050" centres. Opp each step support & groove between with blunt penknife.

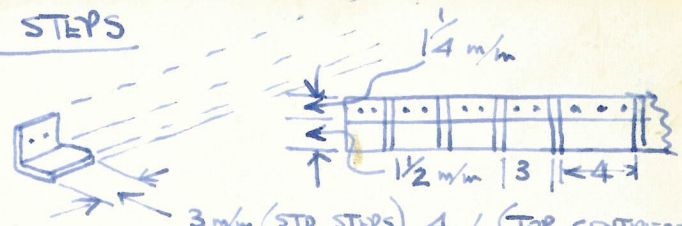


AFTER ALL CUT OUTS & DRILLING COMPLETED, GIVE A COAT OF HUMBROL PLASTIC MATT BLACK (IN 8D TINS)

THREAD ALL WIRES (·009" TINNED COPPER) & TWIST BEFORE ASS. TO COACH STEP SUPPORTS THUS

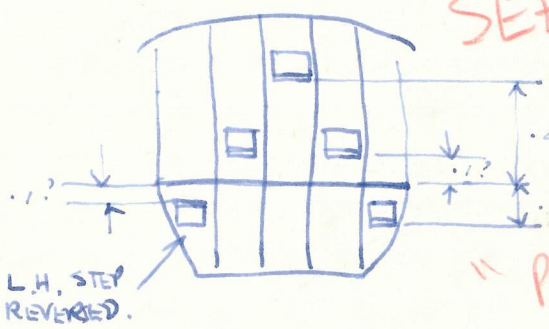
& PAINT SOLEBARS ONE OR TWO COATS OF SAME PAINT BEFORE ASS. STEP IN POSITION.

END STEPS



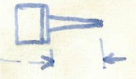
USE ·075" COPPER STRIP.

SEE LATER METHOD BY " PUNCHING



PRESS IN BLOCK OF BALSA (SAY 30 BATCH) & SOLDER TAG TO EACH (TAG MADE FROM ·00 SPRINGY BRASS STRIP CUT TO APPROX ·030" WIDE X SAY 4" LONG.

TAG AFTERWARDS TRIMMED APPROX. 1/8" to 5/32" LONG & POINTED.



NOTE:- TAGS NO NEED TO BE BENT OVER INSIDE COACH IF PILOT HOLE DRILLED WITH ·018" & 'SLOTTED' BY WRIGGLING 'EXACTO' BLADE TO & FRO.

NOTE:- MUST BE GIVEN 2 COATS OF HUMBROL PLASTIC MATT BLACK (8D TIN) BEFORE PLACING IN POS. ON COACH END (THE LATTER SHOULD ALSO BE FINISHED PAINTED IN GW. CHOC. FIRST)

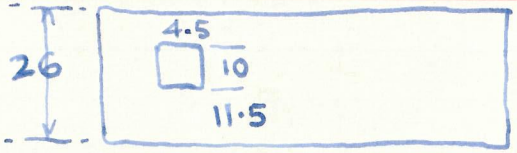
NOTE:- BEFORE ANY PAINTING, HOWEVER, STEPS SHOULD BE TRIED OUT & FITTED TO COACH END (NICE PUSH FIT) THEN STORED IN BALSA WOOD SUITABLY MARKED ↖ COACH AND PAINTED WHILST IN BALSA WOOD

COACH SIDE & END PANELS

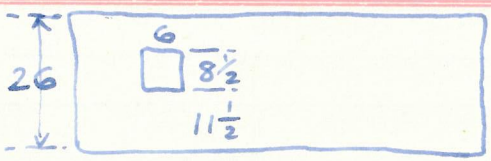
NOTE:- END PANELS ON 1960 LOT WERE .015" (NOT EASY TO STICK)
↗ USE .010" THROUGHOUT IN FUTURE

.010" QUALITY CARD (FROM. N. DALE)
VARNISH WITH ANCOL★LAC. ONE SIDE THEN DRAW OUT. & THEN VARNISH OTHER SIDE BEFORE PUNCHING & CUTTING OUT.
↖ TRY THIS BUT NOTE 1960 ~ 4 WHEELERS ONLY VARN. 1ST SIDE

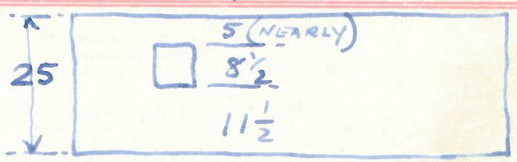
WITH 7" TOP PANEL.



WITH 12" TOP PANEL



WITH 9" TOP PANEL.



VENTILATORS.

USE ·007" WHITE PAPER
(FERRANTI 'JOURNAL' BACKS)

MEASURE TOP PANELS IN COACH.
& CALCULATE CAREFULLY THE VARIOUS
WIDTHS TO BE CUT (ACCORDG TO
WHETHER 3 or 4 RIDGE TYPE)

i.e. 7" PANELS HAVE 3 RIDGES
9" " " 4 "

Note:- Use new EXACTO BLADE
AND CUT CAREFULLY WITH SEVERAL
STROKES TO AVOID CRIMPING PAPER

- ALL STICKING TOGETHER DONE WITH
OWN MADE GUM ARABIC GLUE

- ALLOW PLENTY OF TIME FOR GLUE TO
SET BEFORE PAINTING. CREAM (SEV. THIN COATS) — OTHERWISE THE PAINT NEVER DRYS OUT.

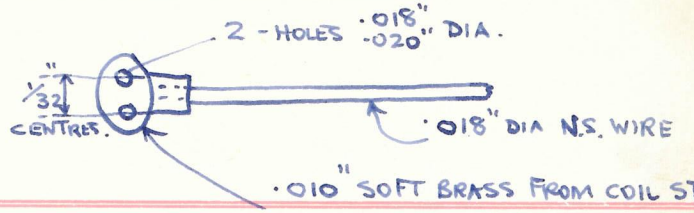
PAINTING CREAM MUST HAVE VERY
THIN COATS — SAY 6 or 7.

AFTER CUTTING TO LENGTH THE ODD
BARE EDGES & CORNERS ARE COVERED
WITH ONE COAT (NOT EASILY SEEN)

STUCK IN POS. ON COACH WITH
CROID — WATCH FOR DEAD HORIZ

NOTE:- TRY VENTS OUT ON COACH SIDE
'DRY' FIRST & GET THEM NICELY
'BALANCED' BY SELECTION.

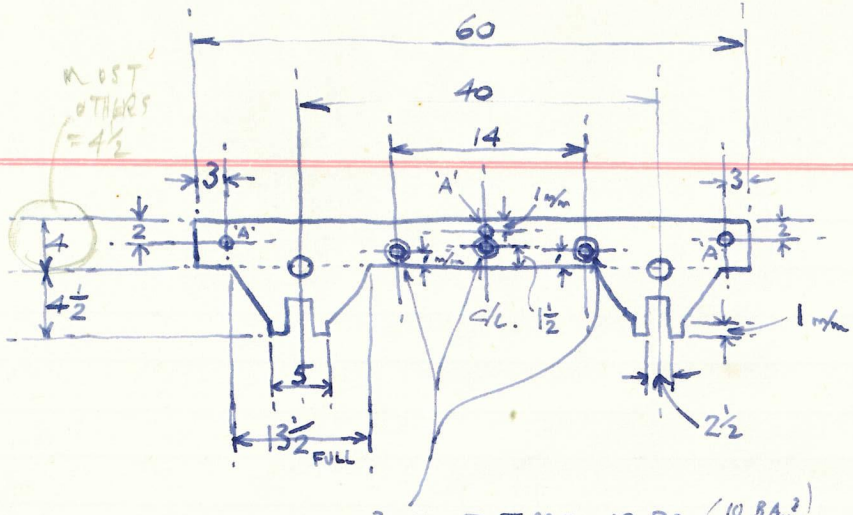
TRAIN ALARM SIGNALS



NOTE:- SOLDER TO WIRE WHEN SHAPED ROUGHLY 
AND THEN TRIM UP HOLDING IN PIN CHUCK.

PAINT FLAGS APPROX 3 TO 4 THIN COATS OF WHITE (HUMBROL)

10'-0" DEAN BOGIES (SCRATCH BUILT)

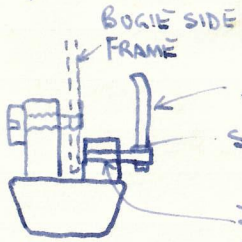


3 - HOLES TAPPED 12 BA. (10 B.A.?)

3 - HOLES 'A' DRILL TO SUIT STAPLES (SMALL) USED AS STEP SUPPORTS

2 - BEARING HOLES DRILLED TO CLEAR .075" NUCRO SHAFT. (SAY .078")

.030/.035" FAIRLY HARD BRASS. (OR HARD N.S.)



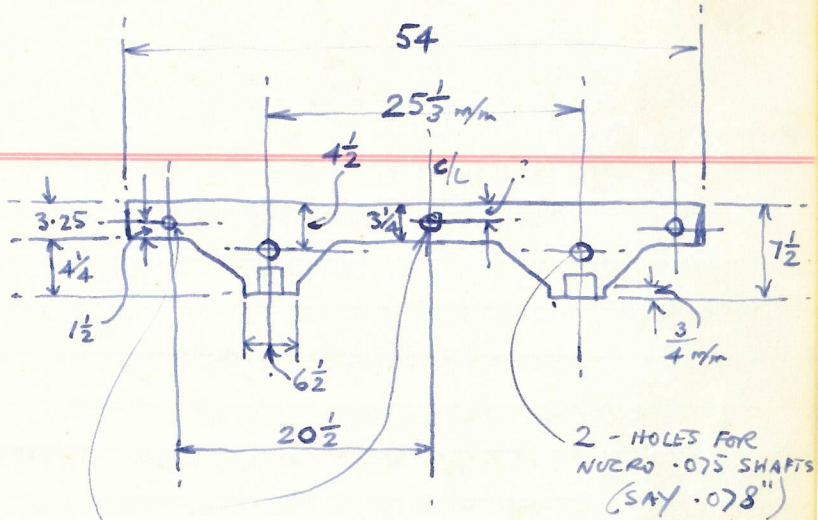
.028" N.S. WIRE (PROB. UNDERSIZE)?

SOLDER .028" WIRE TO SPLIT PIN.

DRILL No. 73 RIGHT THRO' LUG FOR TIGHT FIT OF STD SPLIT PIN.

NOTE!- STEPS FOR ABOVE 10' BOGIE ARE CUT 66 m/m LONG.

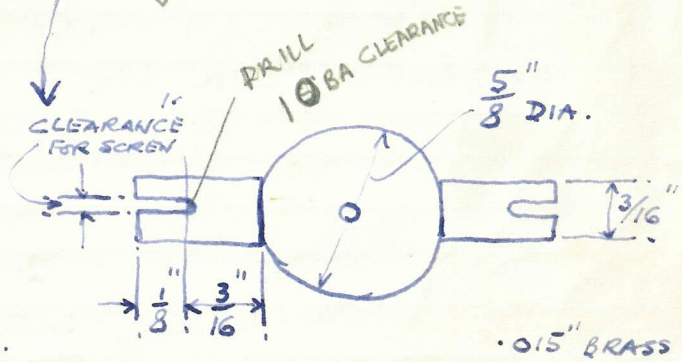
6'-4" DEAN BOGIES



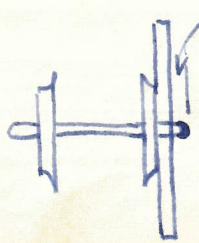
2 - HOLES FOR NUCRO .075 SHAFTS (SAY .078")

2 - HOLES FOR SMALL STAPLES USED AS STEP SUPPORTS SOLDER STAPLE ON BACK SIDE.

12 B.A. TAPPED HOLE FOR ADJUSTING HEIGHT (10 B.A.?) OF RUBBING PLATE BELOW:-



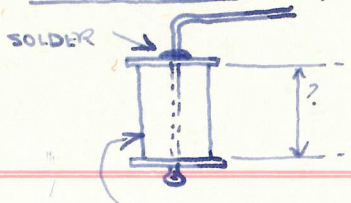
.015" BRASS SHEET.



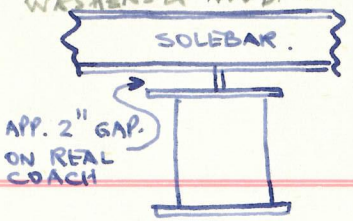
REDUCE TO 2m/m WITH SHIELD IN POSITION

VAC CYLINDERS

4 WHEELERS (1960)



DRILL .035/.038 hole in WASHERS & WOOD ✓



USED .254" DIA. (6 m/m) WOOD DOWEL FOR 4-WHEELERS (1960)
(DRILL RIGHT THRO CENTRE FOR SPLIT PIN).

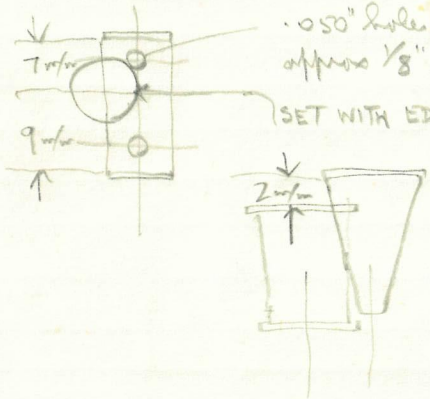
FIT .010" BRASS WASHERS TOP & BTM.

BOGIE VEHICLES

(SAME PRINCIPLE OF CONSTRUCTION) (LARGER DIAM. FITTED)
(SEE 1960 BOGIE BRAKE 3RD. WITH 6'-4" BOGIES
SIZE? & LENGTH.?

SYPHON Fm

Mod .305" DIA. DOWEL (APPROX 7½ m/m DIA.)
cut 7 m/m LONG.



CROSS WIRE USE .015 BRASS WIRE LARGE COIL.

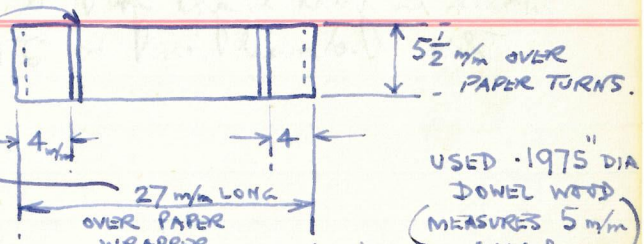
GAS CYLINDERS

4-WHEELERS (1960)

(SOMETIMES 2 GAS CYL. FITTED)

ALL SHORT 4 WHEELERS (SAY BELOW 30')

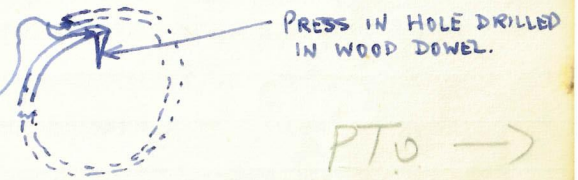
NOTE 38'-6¾ BOGIE BRAKE WAS ALSO 27 m/m LONG



(CUT WOOD 26 m/m LONG.)

USED .1975" DIA DOWEL WOOD (MEASURES 5 m/m A.N.A.P.)

CUT THESE FROM .008" BRASS STRIP. (HARD) TO A FULL 1/32" WIDE & WRAP ROUND (START THUS:-

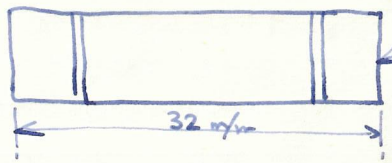


TIN READDY FOR SOLDERING

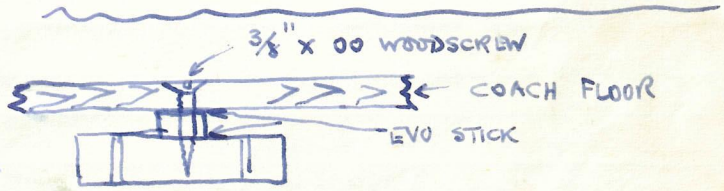
PTO →

LONGER 4 WHEELERS (31'-0 3/4")

SAME AS ABOVE BUT LONGER

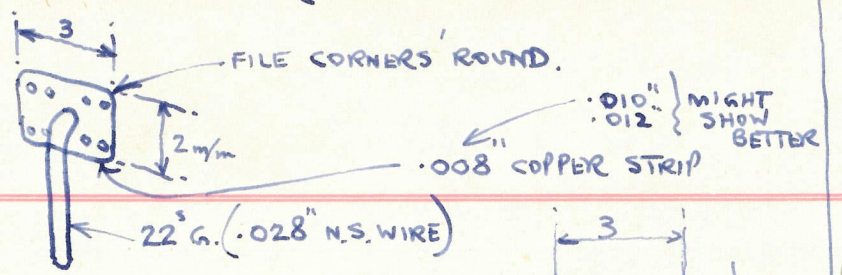


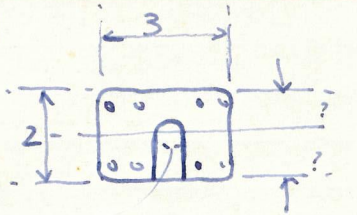
DWG. IN MRC. FEB 46 P.19 SHOWS 2 TANKS FITTED.

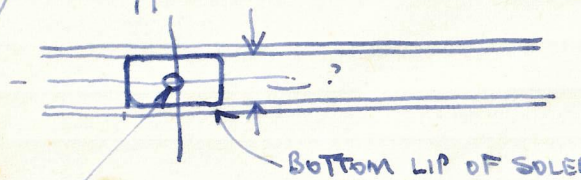


I PAINTED 1960 LOT WITH FER. ART METAL BLACK (GIVES A SLIGHT SHEEN BUT DRYING TAKES A WHILE

SCROLL IRONS (BOGIE VEHICLES)



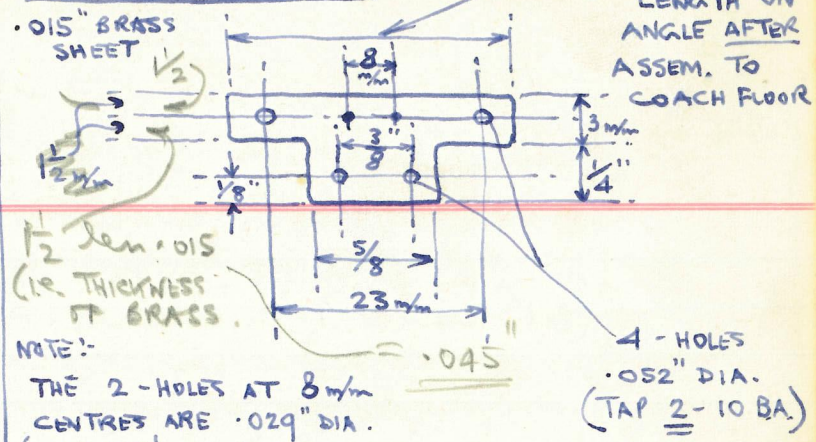




DRILL HOLE & THEN ANGLE OFF & CARRY THE HOLE THRO' INTO COACH FLOOR

NOTE:- WHEN MARKING OUT THE POSITION OF SCROLL IRONS ON THE SOLEBAR, PLACE COACH BODY ON BOGIES ON THE TRACK FOR PERFECT LINING UP.

BUFFER BEAMS



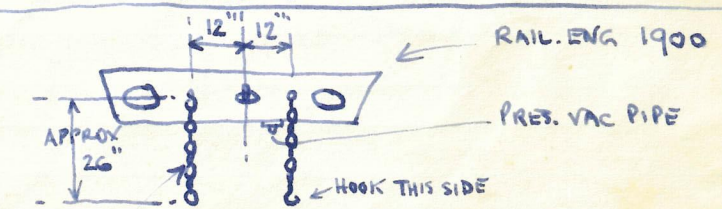
NOTE:- THE 2-HOLES AT 8 m/m CENTRES ARE ·029" DIA. (ONLY REQ'D ON BOGIE COACHES WHICH ARE FITTED WITH SAFETY CHAINS)

NOTE:- USUALLY DRILL THE HOLE FOR VAC PIPE AFTER ASS. TO COACH (THEN MARK OUT POSITION OF VAC PIPE & DRILL)

SAW OUT AFTER BENDING.

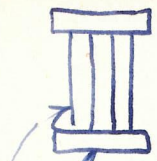
BENDING

BEND WITH THE 3 m/m STANDING PROUD OF JIG & JUST SHOWING SCRIBED LINE.

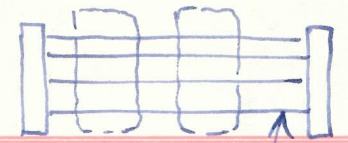


9 RINGS (BTM ONE BIGGER)

WINDOW BARS



USE JIG MAKING 8 PER TIME & SPACE SUPPORTS ACCORDING TO VERT. OR HORIZ. BARS.



4 WIRES 1m/m SPACING ON VERTICAL BARS.

SPACING ON HORIZ WILL VARY ACCORD. TO DEPTH OF WINDOW.

SHEET TIN (COCOA ETc). CUT APPROX $\frac{1}{16}$" WIDE × $\frac{1}{2}$" LONG.

THE WIRE USED IS ·012" TINNED COPPER WIRE (i.e. LOW VOLTAGE BLACK FLEX FROM LARGE REEL).

NOTE:- WHEN CLEANING THE TIN'D COPPER WIRE WITH EMERY PRIOR TO SOLDERING THE COPPER SOMETIMES SHOWS THRO' — ON THE 38' - 6 3/4 SHORT BOGIE 3RD I PAINTED THE WIRES WITH HUM. ALUMINIUM PAINT — NOT TOO BAD.

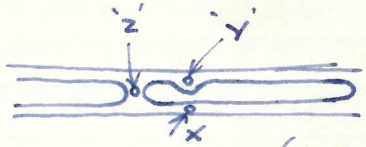
COACH DOOR HANDLES & COMMODE HANDLES

USE ·018" BRASS WIRE FROM LARGE COIL.

CLEAN VERY THOROUGHLY WITH EMERY IN APPROX 2 FT. LENGTHS BEFORE STARTING EITHER HANDLE.

(ESSENTIAL TO LACQUER AS SOON AS READY FOR FITTING TO COACH BODY TO PREVENT TARNISHING.)

FITTING TO BODY



① USE GRAMO NEEDLE FOR CENTRING (PUSH IN FAIRLY HARD) (MUST BE DEAD CENTRE AT 'X')

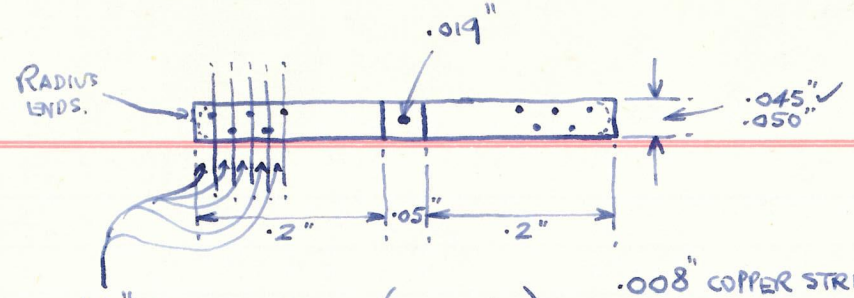
(2) DRILL ~~THE~~ ALL HOLES 77^S (·018") BUT 'X' HOLE NEED ONLY BE ½ WAY THRO IF HANDLE IS CUT TO SUIT. ie.  (TRY 'Z' HOLE ½ WAY TOO)

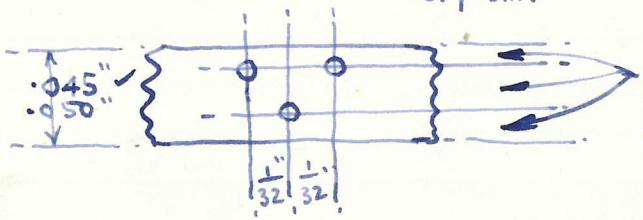
THEN OPEN OUT BOTH 'Y' & 'X' WITH 76^S (COMMODE HANDLE NEED NOT BE A HARD PUSH FIT (AVOID THIS)

NOTE:- AFTER DRILLING 'Z' HOLES WITH 77^S — REVERSE DRILL WHEN PULLING OUT — HANDLE IS THEN JUST A NICE FIT.

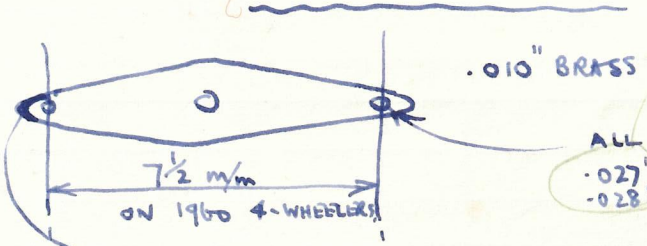
BEST TO DRILL RIGHT DOWN COACH SIDE WITH 77^S BEFORE STARTING TO FIT ANY HANDLES.

BRAKE ADJUSTERS & RODS





SOLDERING WIRE METHOD.



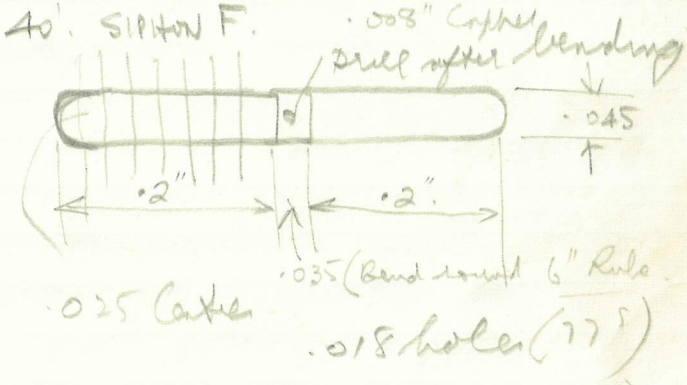
BRAKE ACTUATORS

USE JIG WITH PINS 'ALL SQUARE' & SHAPE AS ABOVE AFTER REMOVAL FROM JIG.

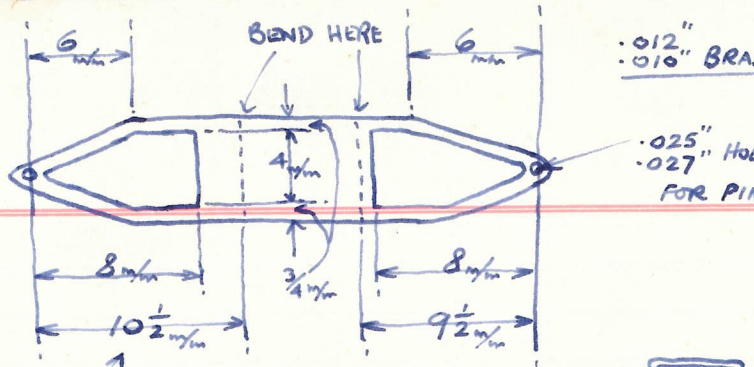
WITH POINTED MATCH PUSHED INTO HOLE IN WOOD BLOCK AT 'A' – 'FILL IN' WITH SOLDER AS REQ'D & STRENGTHEN ALL OTHER PARTS WITH SOLDER (AFTERWARDS 'FLATTEN' BY HAMMERING ON HARDENED STEEL BLOCK.

USE .012" TIN. COP. WIRE (LARGE REEL OF BLACK FLEX.) LOW VOLTAGE.

40'. SIPHON F.



'V' HANGERS

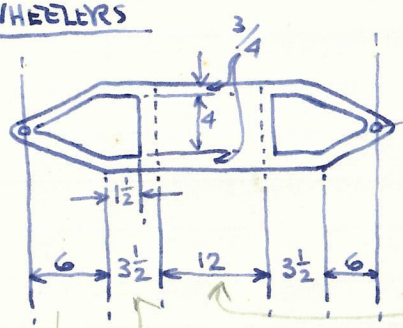


·012" ·010" BRASS

·025" ·027" HOLES FOR PINS.

KINKING THIS SIDE LOSES 1 m/m APPROX

1960 4 WHEELERS



·025" ·027" HOLES FOR PINS.

·010" BRASS.

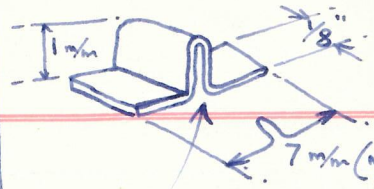
(SYMMETRICAL.)

as above for Siphon F but .16 m/m here instead of 12 m/m

& 2½/m instead of 3½

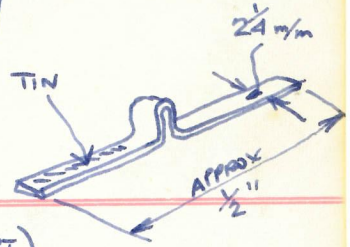
QUEEN POSTS

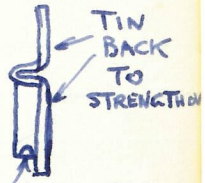
·008" COPPER STRIP.



(NOT IMPORT. AS TRIMMED LATER)

TIN BACK FACE FOR SOLDERING.

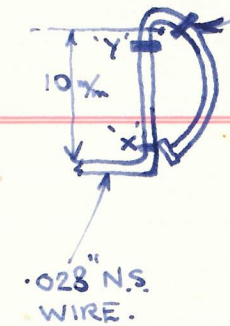




MAKE INTO TAG & PRESS IN COACH FLOOR BEHIND SOLE BAR.

VAC PIPES

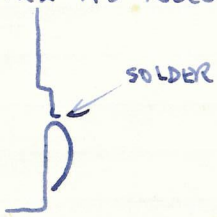
USUALLY COLOURED FLEX. WIRE IN SCRAP BOX. → TINNED COPPER.



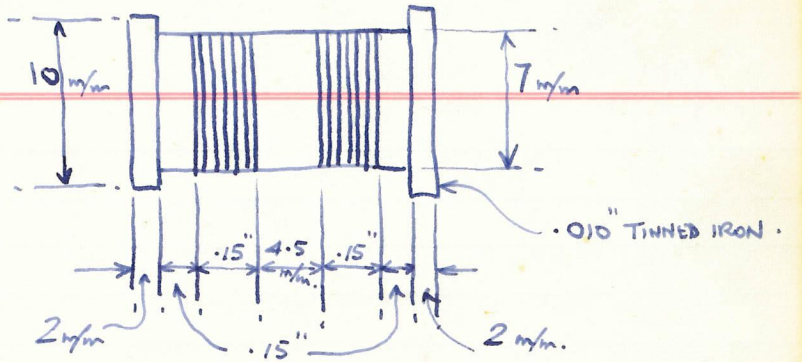
START HERE & WRAP WITH ·008 to ·0085" WIRE (CRITICAL.) & FINISH OFF BY WRAPPING 2 - TURNS ROUND MAIN PIPE AT 'X' & SOLDERING. THEN RETURN TO START & WIND 1½ TO 2 TURNS OVER WIRE TO MAKE DOUBLE THICKNESS (FLANGE) & THEN SOLDER.

AT 'Y' - WRAP 2 - TURNS OF SIMILAR WIRE & SOLDER

NOTE:- ON VAC PIPES FITTED TO ONE END OF VEHICLE, SOLDER ·018" WIRE AS FOLLOWS & REMOVE SURPLUS SOLDER



WINDOW GUARD IRONS (AS FITTED ON 38'-6" BOGIE BRAKE 3RD).



USE WOODEN PLYWOOD JIG (⅛" PLY) WITH HOLES DRILLED FOR THE 7 - VERT. WIRES.

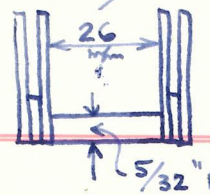
·007" TINNED COP. WIRE (STRAND FROM YELLOW FLEX. WIRE SPACED AT ·025" CENTRES (SEE JIG) (6 SPACES X ·025" = ·150")

THE 2 MAIN HORIZ WIRES ARE FROM LOW VOLTAGE BLACK FLEX ·012" DIA. (BUT ·012 LOOKED BIG - TRY ·009" NEXT TIME)

COACH BODIES

8'- 0 3/4" (eg. 1960 4-WHEELERS) (26 m/m WIDE)

NOTE 1 5/64" USED ON 1959 ALL 1ST. CLER.



CUT BASE FROM 3-PLYWOOD (SELECTED CAREFULLY FOR FLATNESS) 5/32" THK (MIKED AT .156")

THIS 26 mm WIDTH BASE GIVES APPROX 32 m/m OVERALL (ie. 8'- 0 3/4").

ROOF USED ON 1960 LOT, HOBBIES OBECHI WOOD 3" x 1/4" SECTION (MIKED AT .25" THK) & CUT TO 1 9/32" WIDE

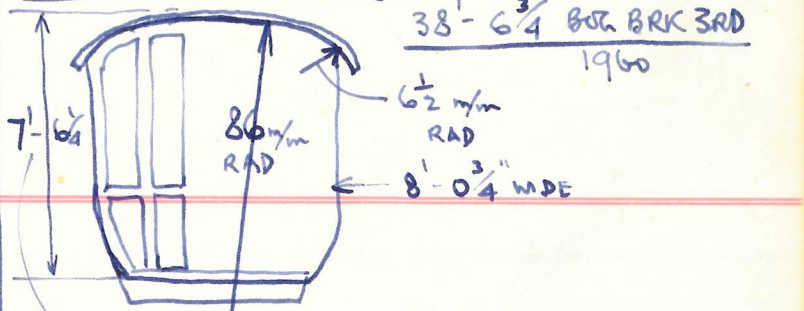
NOTE:- SINK INTO COACH BODY (NICE FIT, NO SLOP.)

AT THIS STAGE

SPIKE SET AT JUST UNDER 3 m/m (2 3/4) ON ALL 1960 JOBS. (LOOK OK. FOR ROOF DEPTH AFTER WHITE PAPER ROOF ADDED).

COACH ENDS (SECTION)

38'- 6 3/4 BOG BRK 3RD 1960

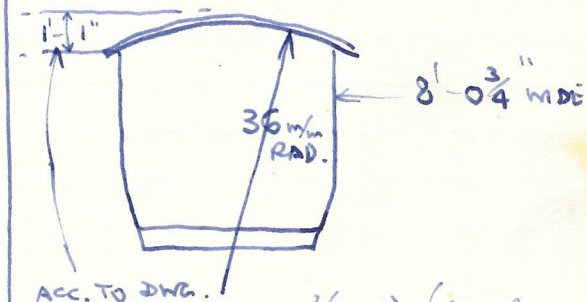


ACCORDING TO DWG (MRC. JAN 43 P.8 CLUB LIB.)

(BUT WHAT DID I MAKE IT?! (1960)

(SEE BRASS TEMPLATE FOR PROFILE 

MRC. FEB 44. P. 25 (CLUB LIB) ALL 3RD 4-WHEELERS

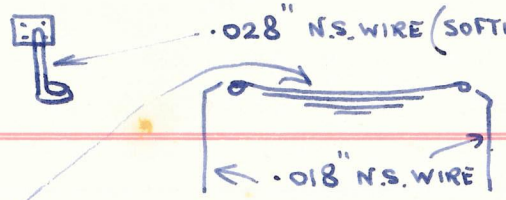


ACC. TO DWG. BUT WHAT DID I DO' (1960) (SEE BRASS TEMPLATE FOR ROOF PROFILE)

MEASURE 1960 COACHES IF ANY MORE MADE.

SPRINGS ETC

FOR 1960 4-WHEELERS USED:-



SPRINGS:- USED ·006" × 1/16" COPPER STRIP. (LARGE REEL)

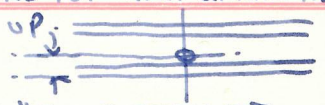
TRIM SPRINGS TO ABOUT 26·5 m/m LONG (EQUAL ON BOTH SIDES OF CENTRE) WHICH GIVES ABOUT 23·5 TO 24 m/m LONG WHEN ROUNDED AT EACH END ⌒.

FITTING SCROLL IRONS (1960 – 4-WHEELERS)

① MARK PENCIL LINE ON SOLEBAR EXACTLY ON C/L OF 'W' IRON.

② MEASURE OFF EITHER SIDE (13 m/m) WITH PENCIL

③ CAREFULLY CENTRE POP WITH GRAM NEEDLE AT APPROX 1/3 UP.

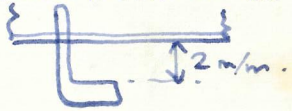


④ DRILL HOLE ·027" DEAD STRAIGHT.

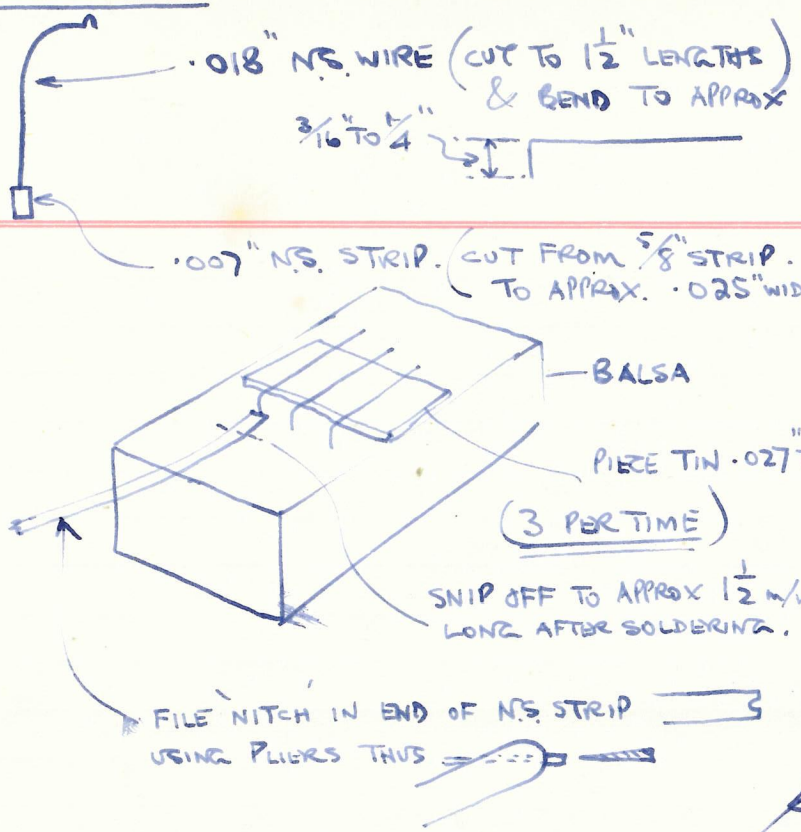
⑤ REMOVE BTM LIP. OF SOLEBAR APPROX. 4 m/m WIDE SO THAT PLATE (▭) WILL SIT DOWN FLUSH ON SOLEBAR.

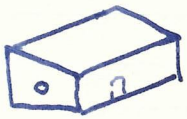
⑥ INSERT ·027" DRILL IN HOLE & APPLY ANGLE CAREFULLY & PRESS IN TO DRILL HOLE IN COACH FLOOR. (IF NOT 'BITING' IN COACH FLOOR USE GRAM NEEDLE TO GET A 'START').

⑦ PRESS IN SCROLL IRONS & SET TO APPROX:—



HAND RAILS





USE WOOD STRIP .·075" x ·070"

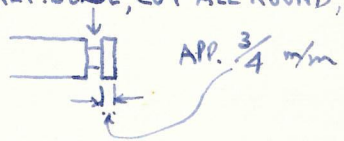
MARK OFF 2 m/m LONG + SAWCUT AFTER FILING ABOUT 3" LENGTH TO

DRILL HOLE (·018") RIGHT THRO' APPROX CENTRE ALSO UNDERNEATH IN CENTRE.

TRAIN ALARM COMPONENTS

USE ⅛" DOWEL WOOD (VARIES ·125" to ·115")

① STICK DOWEL INTO CHUCK OF WHEELBRACE & SAW OFF TO LENGTH (APPROX ¾" PROTRUDING)
② USING 6" MED. FILE, REDUCE DIA. TO APP. ·085"
③ SQUARE OFF END WITH FILE
④ USING GRAM NEEDLE, CENTRE POP. (IN CENTRE)
⑤ DRILL ·018/·019" HOLE IN CENTRE (ONLY ABOUT 1m/m DEEP)
⑥ USING 8OT FRET. BLADE, CUT ALL ROUND, BUT NOT TOO DEEP.



⑦ USING FILE, CHAMFER OFF BOTH SIDES. THUS:-

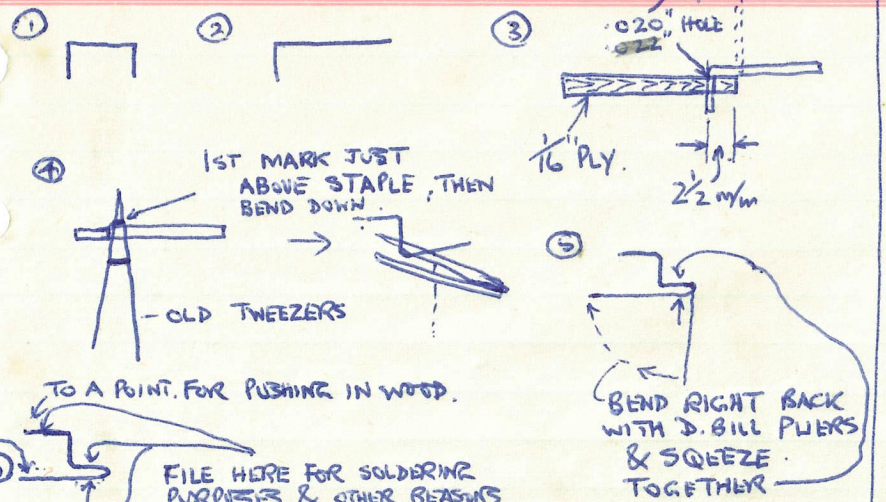
⑧ USING FINEST GARNET PAPER BETWEEN FINGER & THUMB, SMOOTH OFF.
⑨ COMPLETE SAW THRO'
⑩ INSERT ·018" DRILL AGAIN TO COMPLETE HOLE RIGHT THRO' IF NECESSARY.

WE NOW GET →

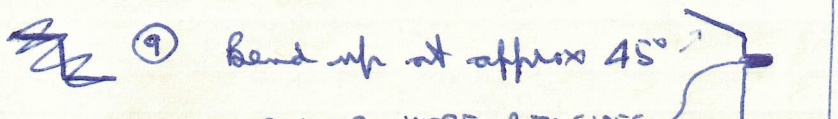
⑪ FILE FLAT WITH FILE BY PUSHING ONTO ·018" OLD DRILL OR WIRE HELD IN PIN CHUCK
⑫ THREAD ON TO ·018" WIRE ABOUT 1 DOZ. FOR PAINTING BLACK (HUMBROL MATT 8) (BEND WIRE OVER EACH END TO PREVENT LOSS)

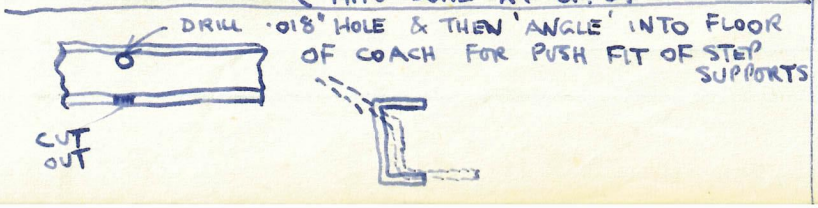
STEP SUPPORTS (4-WHEELERS)

THOSE ON 1960 - 4-WHEELERS WERE MADE AS FOLLOWS:- (USING THE SMALLER OF THE TWO STAPLES)



NOTE:- IF ALL BENT CORRECTLY THE STAPLE IS JUST O.K. FOR LENGTH (NO TRIMMING)



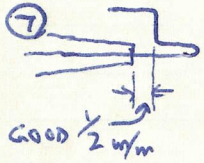


STEP SUPPORTS 1960 38' BOGIE BRAKE

USE LARGE STAPLE FOR FOR ~~ASE~~ AS SMALL STAPLE NOT LONG ENOUGH.

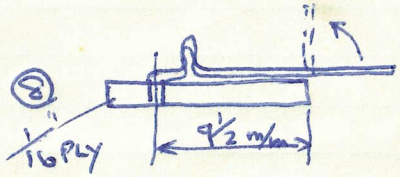
FOR SINGLE SUPPORT USE SMALL STAPLE.

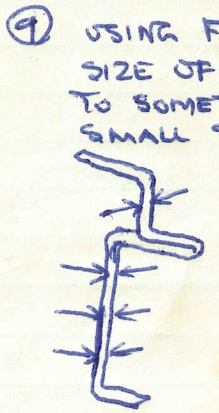
FOR DOUBLE STEP SUPPORT, PROCEED AS OPPOSITE UP TO cf. 6.



USE D. BILL PLIERS AS SHOWN & BEND DOWN AS SHOWN:-

BTM LUG SET BACK OTHERWISE BTM STEP STANDS PROUD OF BOGIE STEPS.





FOR SINGLE STEP SUPPORT  USING SMALL STAPLE