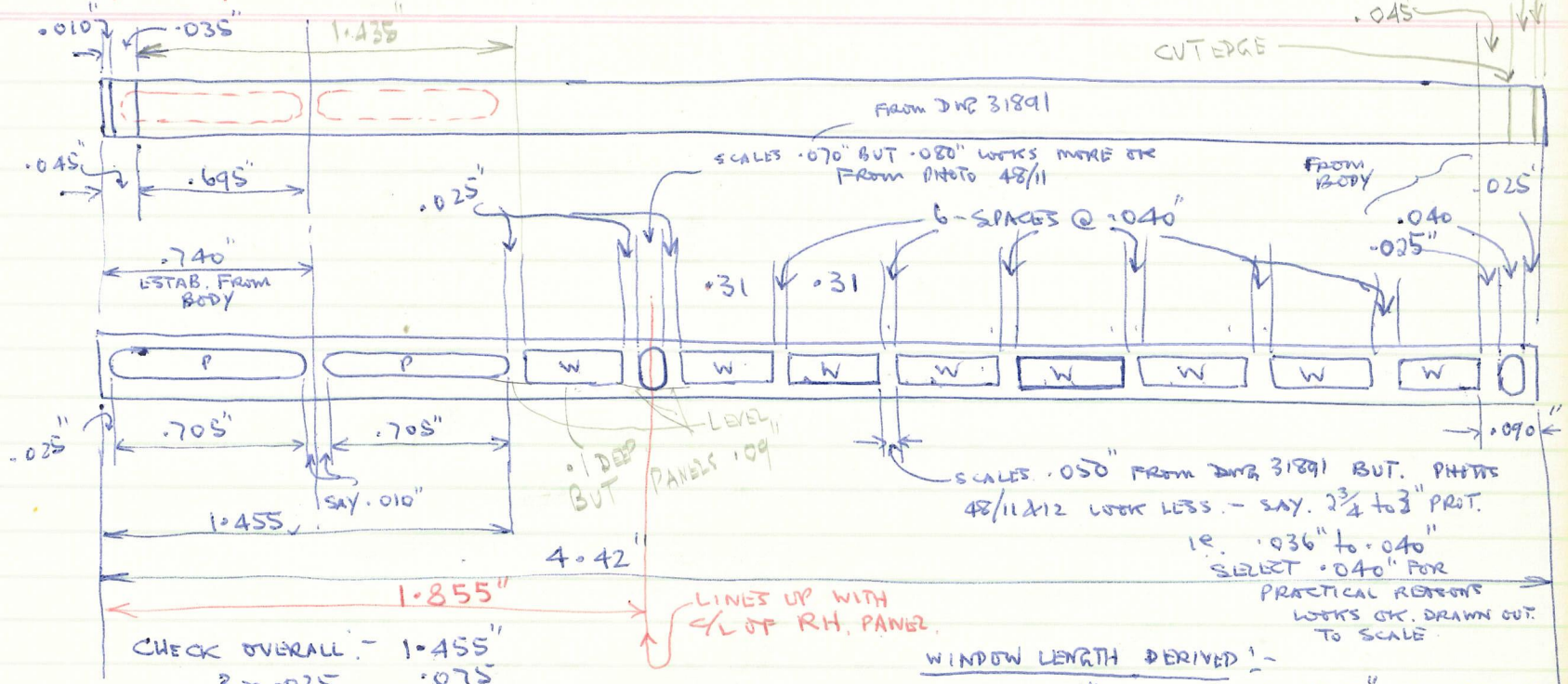
CLEAR. ROOF LIGHTS HORIZONTALS

VG

(VERTS ARE NOW ESTABLISHED TO, ALL TYPES – SEE ELSEWHERE)

ANY PANELS BETWEEN CLEAR LIGHTS? PHOTO 48/11 SUGGESTS THERE MIGHT BE.



CHECK OVERALL – 1.455"

3 x .025	.075
P.	.080
W	.310
7W	2.170
6x.040	.240
	.090
	4.420 = OK ✓

WINDOW LENGTH DERIVED :–

4.42" LESS	1.455" LH. END BIT
.025" x 3.	.075"
PANEL	.080"
RH. END	.090"
6 - SPACES @ .040	.240
	1.940" = 2.48"

2.48" ÷ 8 WINDOWS = .31" LONG

? THIS EQUALS LENGTH OF 1STS = .312" (1'-11¾")

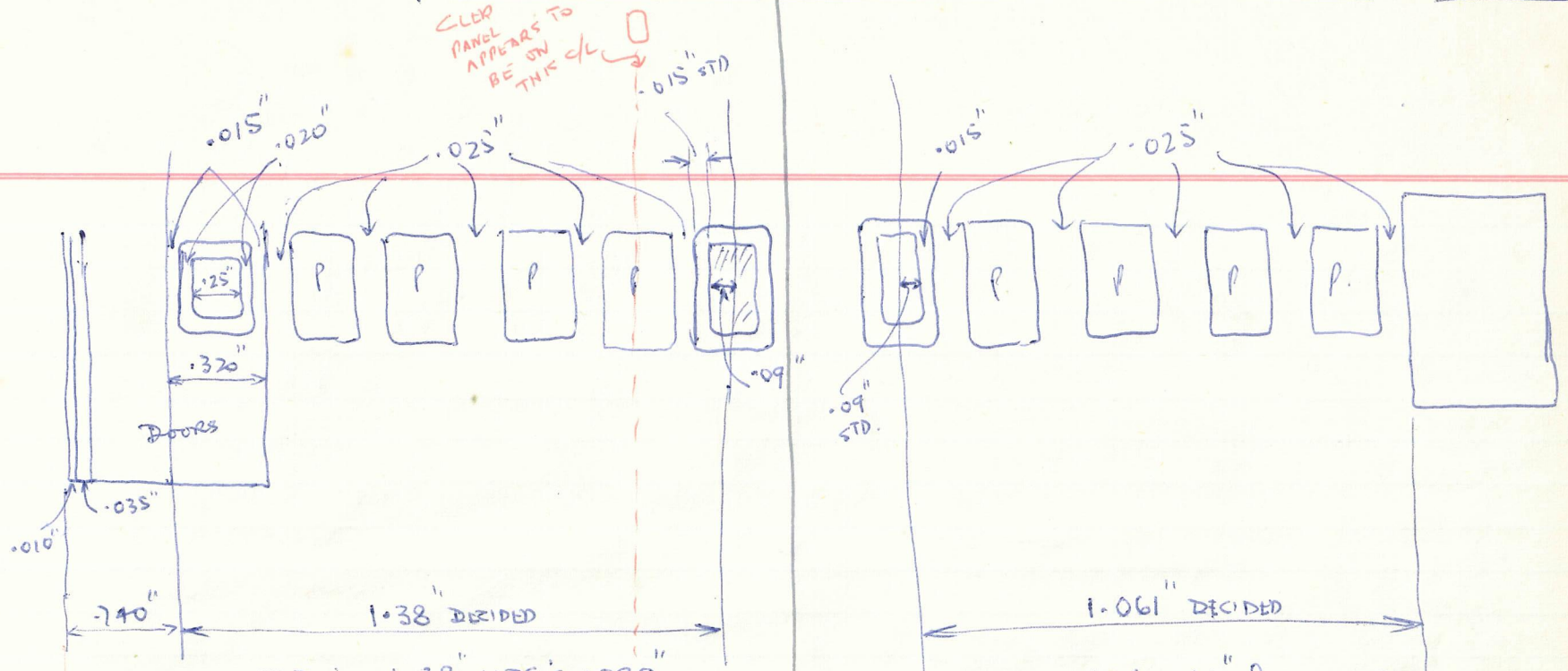
3RDS are 1'-8" = .262"

2NDS are 1-10¼" .292"

ACTUALLY THE CLER LIGHTS DO LOOK QUITE LONGISH ON PHOTO 48/12

CHECK ON 2 - SETS OF 4 - PANELS BEING EQUAL

V6



CHECK :- 1.38" LESS :- .090"
.015
5 x .025 .125
.320
LESS .550 = .830

.830 ÷ 4 PAN. = .2075"

CHECK :- 1.061" less .090
.015
5 x .025 .125
.230 = .831"

.831" ÷ 4 PAN = .2077" OK
NR. ENOUGH.

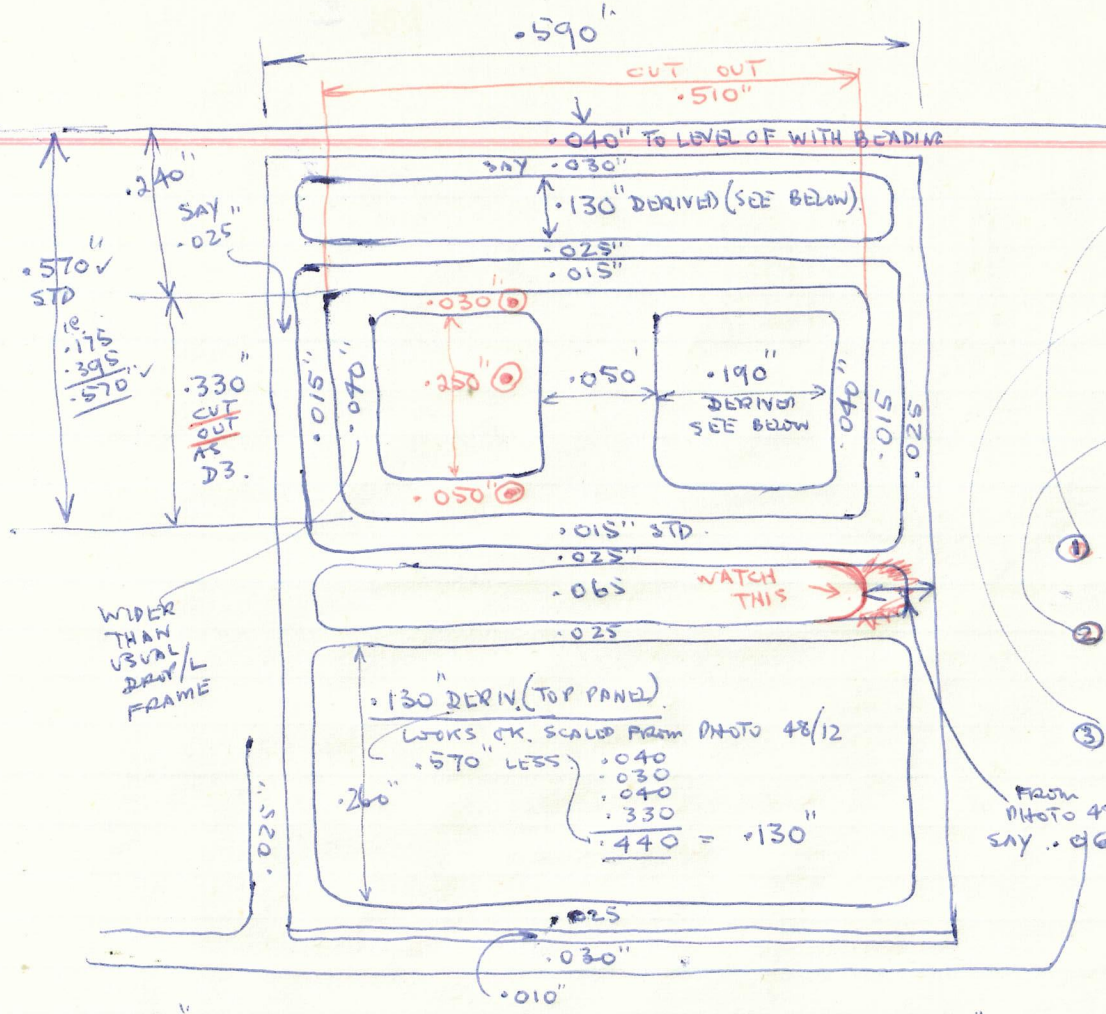
1.869"

= .740
.320
4 x .025 = .100
PANEL .2075
" .2075
" .2075
½ PANEL .1035
1.869

1.855"
COMPARES WITH ~~1.865"~~
ON CLEAR. HORIZ. (OK)
NEAR ENOUGH

SLIDING DOOR DETAILS
WINDOWS PROB. NOT USUAL COACH STD SIZE (SMALL)

V6



DROP LIGHT VERTICALS
SCALED FROM DWG

① ·05" × 48" = 2.4" PROT. ÷ 76 = ·032 SAY ·030"

③ ·4" × 48 = 1 7/4" PROT. ÷ 76 = ·253" SAY ·250"

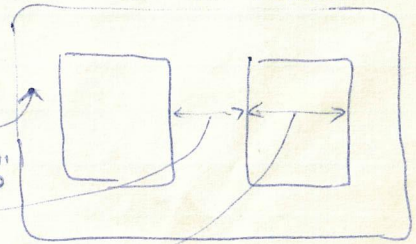
② ·08" × 48 = 3.84" PROT ÷ 76 = ·0505" SAY ·05"

① TOP LEDGE looks more than usual ·025" so ·030" OK ✓

② Btm ledge looks more than usual ·040" so ·050" OK ✓ (SEE PHOTOS 48/12)

③ Checked with D3 which was ·330" cut out less D/L frame (·025 + ·040) = ·265" WINDOW. (COMPARED WITH ·250" WILL DO!

DROP LIGHT HORIZ'S



·190" DERIVED

·590" len. ·050 ·030 ·080 ·050 = ·210 = ·380" ÷ 2 WINDOWS = ·190" OK ✓

SCALED ·06" × 48 ÷ 76 = ·038" SAY ·040"

SCALED ·075" × 48 ÷ 76 = ·047" SAY ·050"

SCALED ·31" AV. × 48 ÷ 76 = ·192"

NEAR ENOUGH!

VG

4 WHEEL CLEAR. JAN 65

28' - 0 3/4" OVER MOULDINGS = 4·42" SCALE LENGTH.
LESS 2 END PLYS @ ·035 ·07
4·35
LESS 2 END MOULDGS @ ·010 ·02
4·33" CUT LENGTH

4·33"

·040"
·590
1·070
·564
1·390
3·654 FROM 4·33
= ·676"

1·025" 26m/m.

·070" STD. ·18 STD ·040"
·175" 4½ m/m
·395" 10 mm
·455" 11½ m/m
·570" STD.
·250"

·040" DERIVED :- ·085" LESS ·010" MOULDG & ·035 END PLY = ·040"

·020" ·028"
DECIDE ON ·040" PUNCH. (LOOKS OK)

·085"
5 3/8" (PROT) = ·070" APP. BUT ACCEPT ·085" AS THE ALTERNTVE ·025" PANEL WOULD BE RATHER TOO THIN

DECIDE ON ·040" IE. JUST SHOW A ·010" LEDGE OVER ·030" BTM MOULDING

·676" BUT ·695" DECIDED (SEE BELOW)
1·39" DECIDE 1·38"
·564"
1·07" DEC. 1·061 ✓
·590"

LOOK OUT
SHOULD BE 29½" OVER MOULDINGS
= ·388"
LESS 2 × ·010" (MOULDINGS) ·020
·368 SAY ·370" ✓

ie ·676" to ·695" = ·019" INCREASE (TO BE RECOVERED FROM OTHER HORIZ. DIMENSIONS.

DECIDE (AFTER TRIAL & ERROR TO GET THE 2 SETS OF 4 PANELS, SAME SIZE :-
1·39 len. ·010" = 1·38" ✓
& 1·07" len ·009" = 1·061" ✓
·019" REDUCTION.

·045"
·370"
X
·020"
·250"
·015"
·035" END PLY.

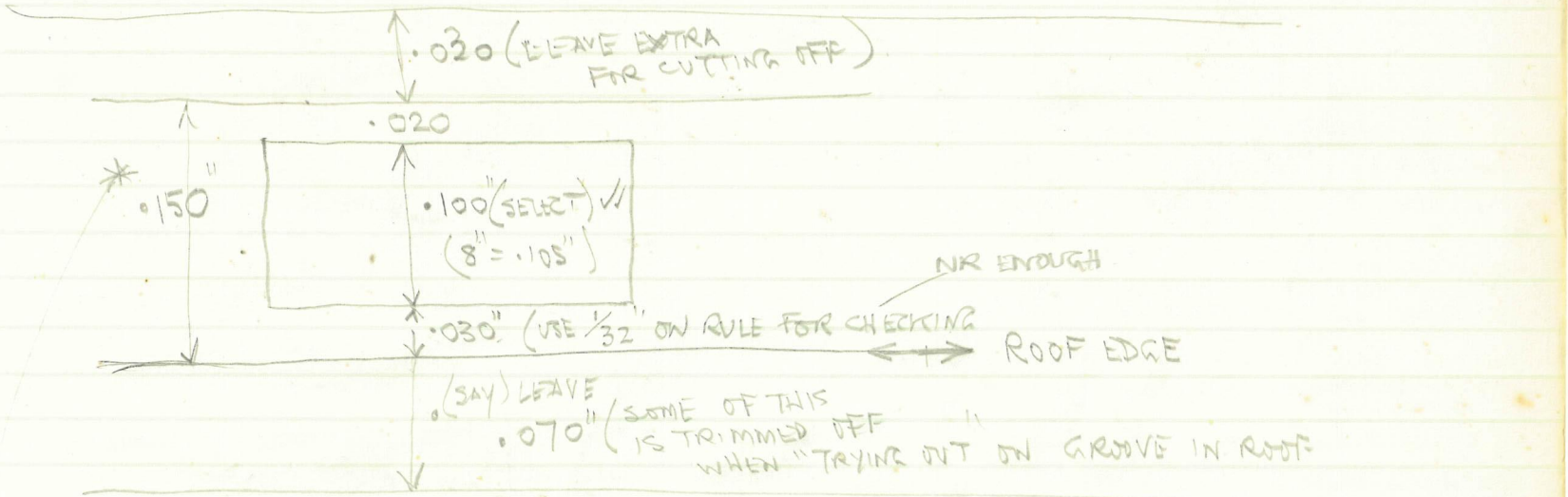
·010"
·370"
·320"
·010"
SAY ·010"
SAY ·020"
KEEP TO MIN. SO THAT DIM 'X' IS KEPT @ MIN (·045") LOOKS OK @ E26 MODEL LOOKS SIMILAR (APP. ·040 to ·050") ✓

CUT END
·695" CHECKED ✓

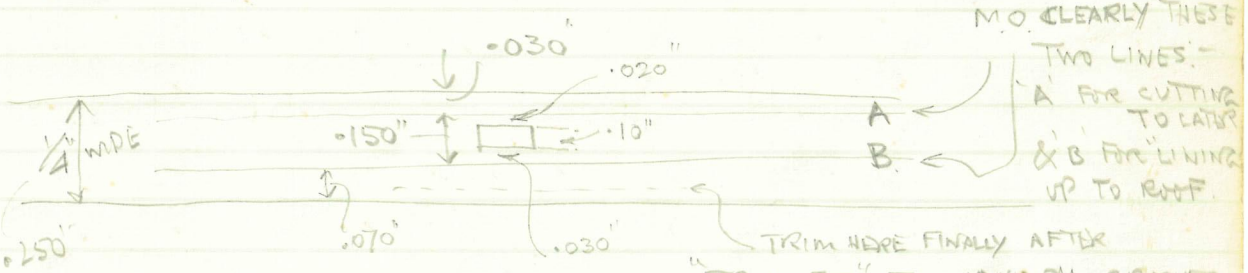
·740"
= APP. 4'-8"
COMPARED WITH PROTOTYPE 4'. 7⅞" ✓ OK ✓

FINAL CHECK
·040
·590
1·061
·564
1·38
·695
4·330 = TOTAL LENGTH ✓ OK.

CLERESTORY ROOFS. DEC 1964
BASED ON RECENT EXPERIENCE WITH E26, D3 ETC



.250
.180
.070



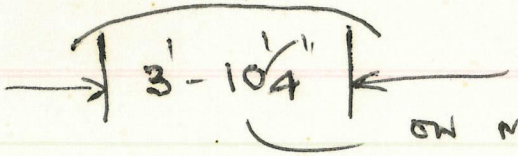
M.O. CLEARLY THESE TWO LINES:- 'A' FOR CUTTING TO LATER & 'B' FOR "LINING UP TO ROOF"

Note:- E26 measured 5/32" (.156")

CLER ROOF WIPERS

LESS. ·600
·090
·510

3'·0" = ·472"
9½" = ·1247
·5967
SAY ·60"



SWINDON
ON MOST DWGS EXCEPT FEW ODD ONES
@ 4'-~~0~~?

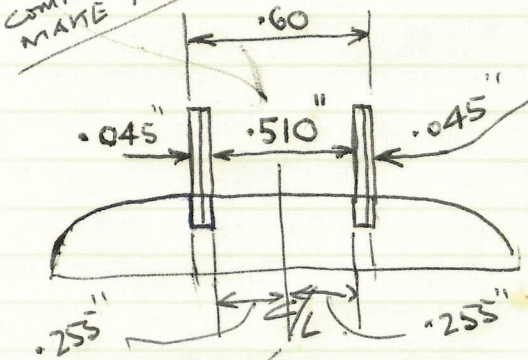
① WITH PANELLED CLERESTORIES

Presume mouldings are ·3/8" thick as per body (IGNORE MY MOULDINGS (PAPER) ARE APPROX ·009" INSTEAD OF SCALE ·006")

∴ 3'-10¼" less (2 × ·3/8") = 3'-9½" ACROSS CLER MAIN SIDES
i.e. SCALE ·60"

TOO FLIMSY IN PRACTICE

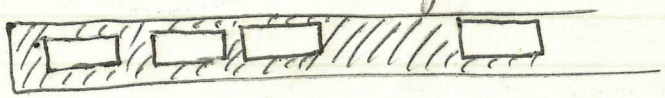
VERY NEAR TO MODEL E26 JUST NEARING COMPLETION (DIDN'T MAKE RECORD.



MARK OFF ℄ @ EACH END, FROM ℄ OF COACH END TO ENSURE THE CLER. ROOF IS IN THE CENTRE

THESE SIDES (USING ·020" THK PERSPEX & 2 PLY WOOD) ARE CONSISTENTLY ·045" TOTAL THICKNESS, WHEN STUCK TOGETHER WITH EVOSTICK

NOTE:- When sticking together firstly Mark out on the PERSPEX the area to be glue applied, thus:-



using gram. needle.

STICKING PROCESS STICK approx ½" to 1¾" at a time & keep putting under weights for a couple of minutes (using EVOSTICK) until the whole length is stuck

CLER → 5/32" DEAD.

1/32" DEAD TO BTM EDGE

TWO MUCH?

PICTURES IN CPT. .8" x .25" IN IND. INK THEN TRIM ROUND AFTER PAINTING (INK SKETCH IN BEFORE PAINTING)

1964 Paint used for LINING coaches: Windsor & Newton Students Oil Colour (Tube) "CHROME DEEP" 1/4

76 (500 / 256 / 440) .066"

Seats.

1/4" x 1/8" Section wood with rounded edges

SAND

PTNR either 1/16" ply or 3 PLY (AS BASE) M.O. 21 m/m & saw on Hobbies M/C (21 m/m dead)

FOR PAINTING, measure down 9/32" & apply sticky tape

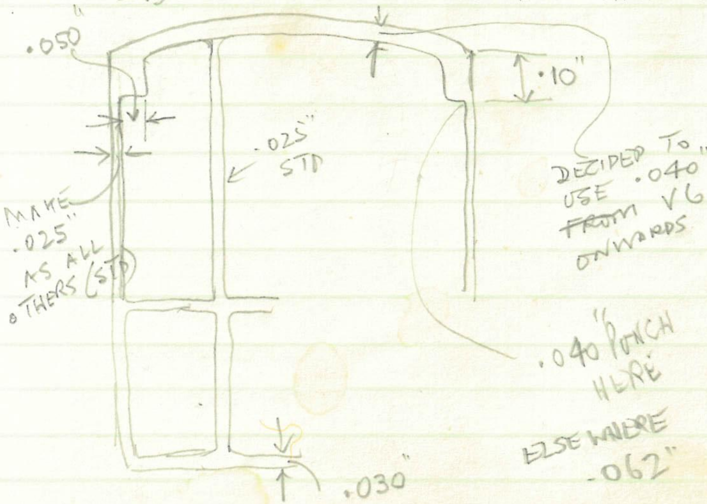
Roofs (Card) Use .010" GLOSSY CARD FROM N. DALE LENGTH - CUT 1/2 m/m LONGER THAN MEASURED LENGTH OF COACH BODY (& SAND BACK 1st)

ROOFS RAINSTRIP" APPLY .025 WIDE (SAME MAT AS ROOF) PHOTO OF CLER: AT (? JIM RUSSELL PHOTO LOOKS ABOUT 5") i.e. .066" SAY

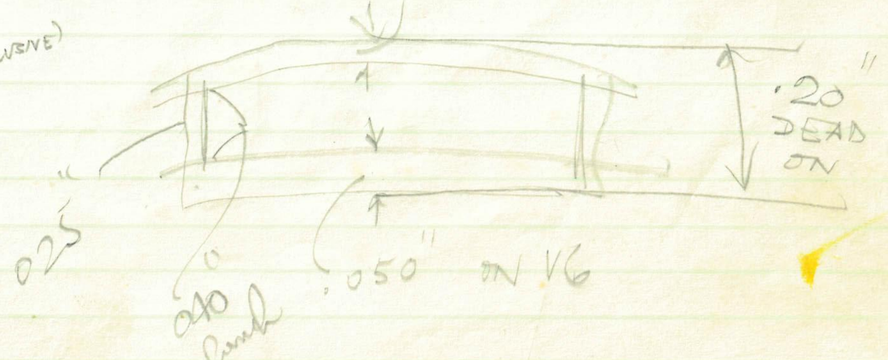
ACTUALLY USED CELL JIG SET 1/20" EACH END LOOKS OK.

BUT END STRIPS IS 1/32" WIDE

END MOULDINGS WITH ALARM PANELS

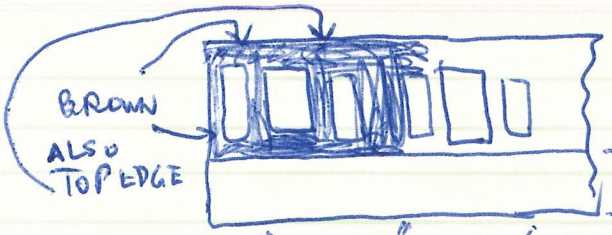


.030" ON V6

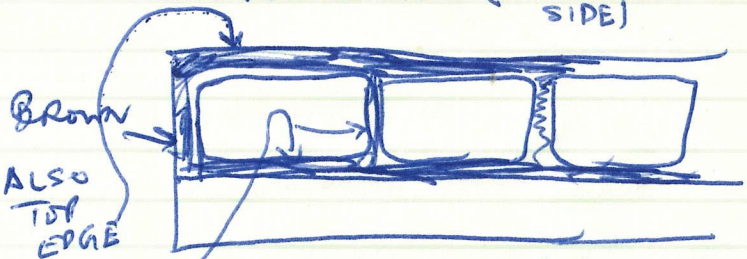


PAINTING DURING PROCESSING

COACH SIDES



"INSIDE" VIEW (OF OUTER COACH SIDE)



OUTSIDE VIEW OF INNER COACH SIDE

NOTHING

DIAG DWG. ✓ NR. ENOUGH
SCALES .020
(USE .025" PUNCH)

CLER HORIZONTALS

D3

3RD. CLASS CLER LIGHTS = 1'-8" x 8" (.262") (.105")

.010" .248" .02 .026" .02" .01 .248 .020" .120" = .882" CHECK TOTAL ✓

.120" .02

5½" FROM MY RECORD BOOK (IE. .072")

.240"

.274"

.882" (5'-7¼")

MY RECORD BOOK SHOWS 24¼" (.318")

.300" (NR. ENOUGH TO ACHIEVE TOTAL BALANCE)

*NOTE:- TO GIVE THE .026" CENTRE PANEL. THE .274" DIM. WAS REDUCED FROM .285" ON LOWER DECK, ALSO THE WINDOWS (1'-8" IE. .262") WERE REDUCED TO .248").

MY RECORDS SHOW 1'-7" (.249") AS DOES MRC., BUT REDUCED TO .240" TO 'BALANCE' TOTAL.

CLER. END PANEL CHECK →

.020" .268" .12"

.025"

.248"

.274"

.285"

LOWER WINDOW AT DIFF. CENTRES IE. .285 NOT .274"

.481"

= .12 .02 .268 .020 .025 = .453"

.481" LESS .453 = .028" IE. OK ✓

NR. ENOUGH TO OTHER CLER PANELS (.026") ✓ USE .025" PUNCH

7.244" AS MAIN COACH SIDE

.274" CENTRES (NOT .285" AS ON MAIN COACH)

NO LIGHTS IN CENTRE VAN

.30" ✓

.548"

.248"

.25" WIDE

.434" .882" .882" 2.848" .882" .882" .434

.035"

.1"

.030"

ROOF LEVEL

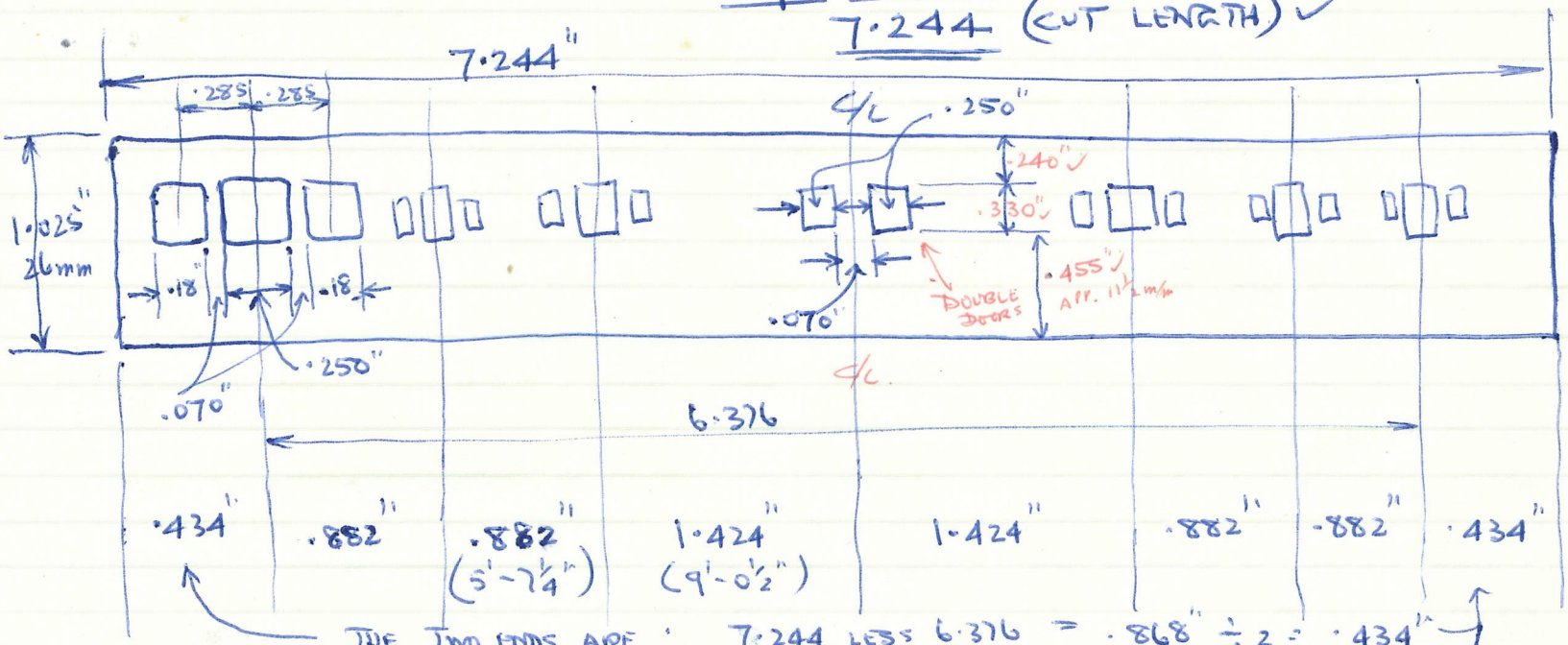
SEE ELSEWHERE

D3

46'- 6 3/4" OVER MOULDINGS = 7·338" OVERALL LENGTH.

LESS. END MOULDS (DEDUCE ON ·010" PAPER) = ·020"
" ·035" PLY. x2 ·070
" 4 GLUED SURFACES ·090
·004
·094 ·094

7·244" (CUT LENGTH) ✓

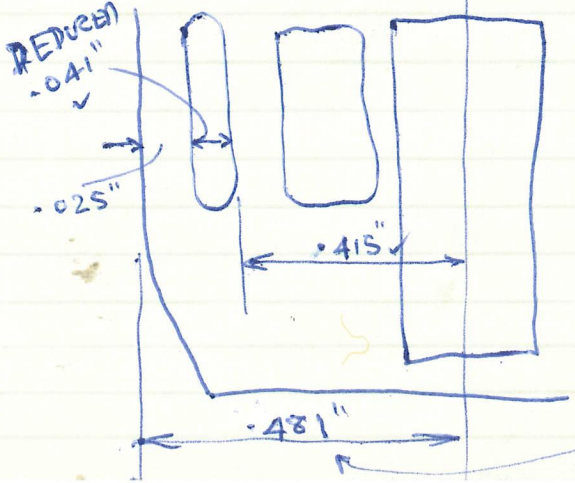


THE TWO ENDS ARE ∴ 7·244 LESS 6·376 = ·868" ÷ 2 = ·434"

CHECK END DIM
ie. 3'-0⅜" (·477") = ·434
ON DIAG. ·035 3 PLY
·010 PAPER
·002 GLUE
·481

NR. ENOUGH.

CHECK END PANEL



ie. ·481" LESS ·415
·440 ·025
·041" ·440

OK ie. 3" PANEL. (ie. LESS THAN OTHER CENTRAL PANELS ON THE COACH (4") BUT DIAG DWG INDICATES THAT THE TWO END PANELS ARE NARROWER.

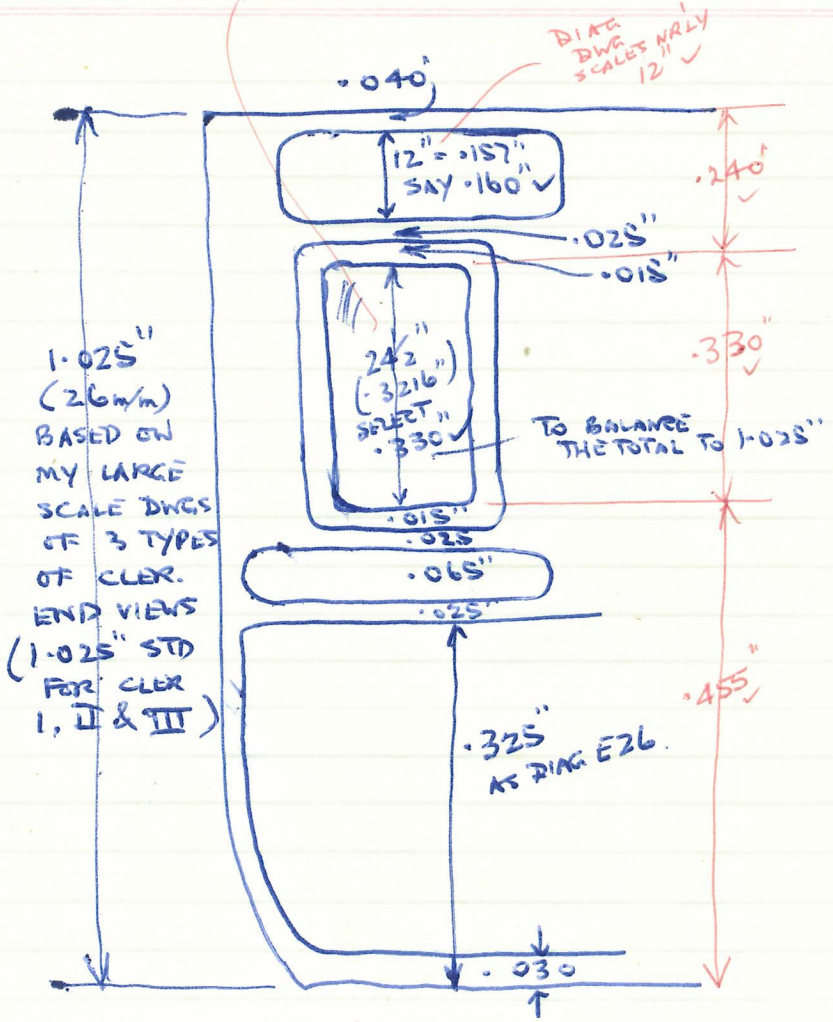
GOT ·040" PUNCH

DIAG. DWG 35417 SCALES THIS ALSO MY RECORD BOOK SHOWS 24½" ✓

LOW WINDOWS & 12" EAVE PANEL.

VERTICALS CALCULATION

D3
1964
CLER I

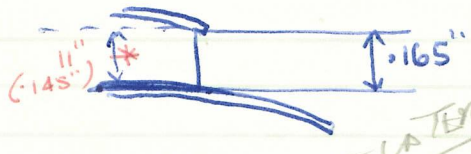


CHECK

·040	
·160	
·040	
·330	
·040	
·065	
·025	
·325	
1·025 ✓	OK

CLER

MY 3 LARGE SCALE DWGS OF CLER I II III ROOFS, SCALES ON ALL THREE, APPROX:-

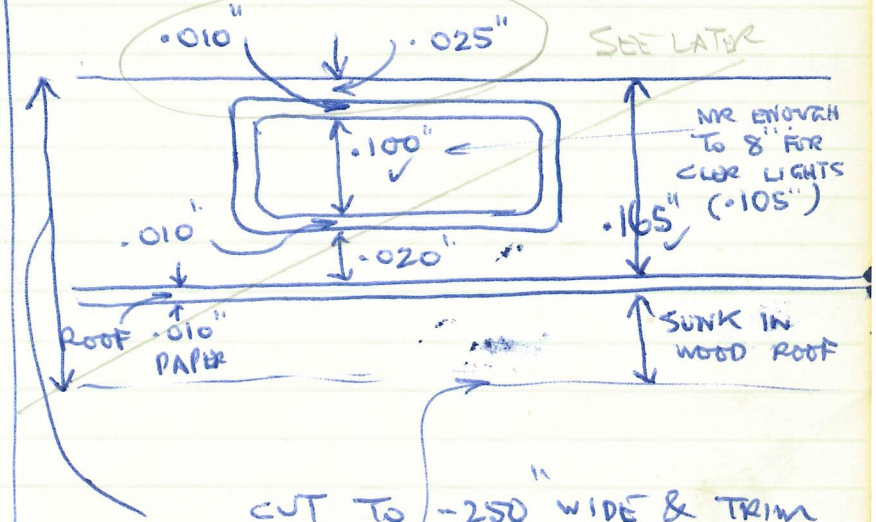


NOTE:- BINNEY QUOTES 11" BUT (·145")
THERE ARE INDICATIONS THAT IT COULD WELL BE AT *

SEE LATER

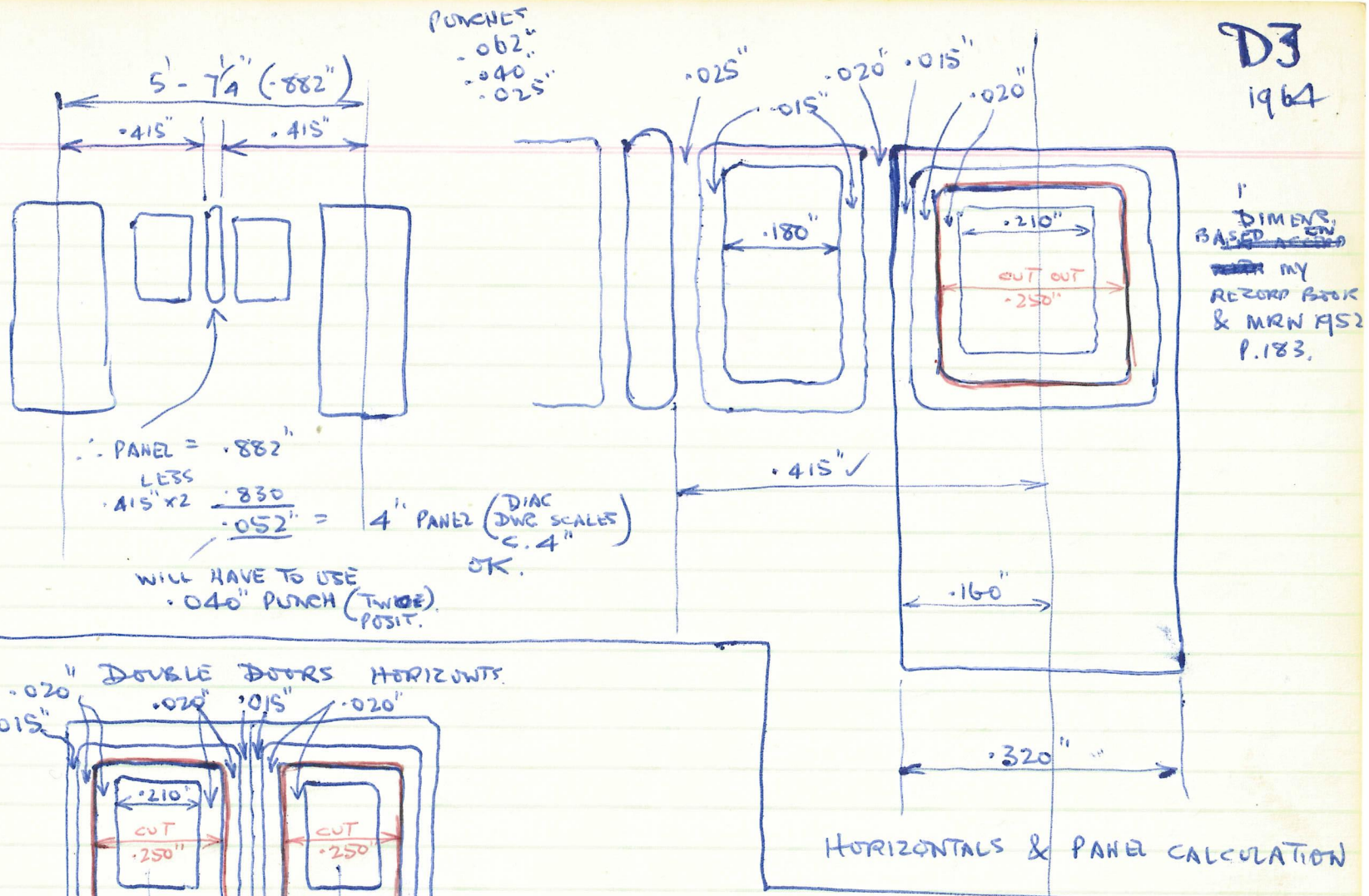
MY DWGS LOOK O.K. & EVERYTHING FITS IN, SO SELECT ·165" ✓ (PREV. E26 ETC I GOT ·170 (NR ENOUGH)

TOO MUCH?!



CUT TO ·250" WIDE & TRIM BTM EDGE AS REQ'D IF TOO DEEP.

D3
1964



DIMENS BASED ON MY RECORD BOOK & MRN #52 P.183.

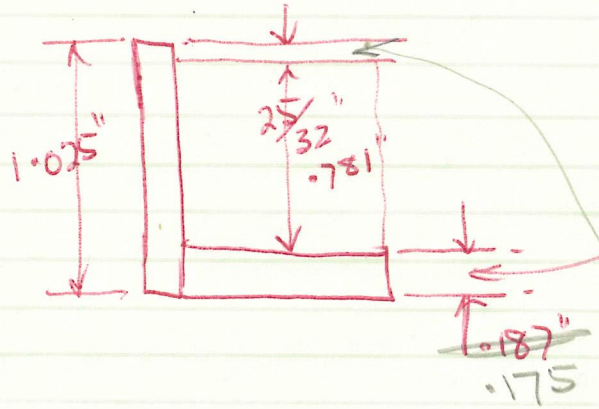
HORIZONTALS & PANEL CALCULATION

D3 HORIZONTALS

FLOOR & PTNS

WOOD USED ON E26 & C3 WAS ONLY .033" to .034" THK (NOT USUAL .036")
WHEN TWO SIDE ASSEMBLIES WERE MIKED AFTER GLUEING
THEY = .200 = .100 FOR EACH SIDE (THUS GLUE THICKNESS CAN BE IGNORED)
3 OTHER STOCK SHEETS MEASURED .034" & .035 & .034"
∴ 8'-0" WIDE (ie. LESS MOULDINGS OF 3/4") = 32 m/m = 1.260"
LESS (6-PLY-SIDES TOTALLING .200") .200
1.060" (NOT 1 1/32" AS BEFORE.

RISK ORDERING 1 1/16" ? WIDE (ALLOW FOR SANDING)



∴ .175" PLY.
USE ~~3/16~~ PLY FOR BASE (~~.187~~")
∴ .187" BASE THICKNESS, CUT SPACERS TO 25/32" DEPTH
THIS GIVES CLEARANCE AT TOP OF .057"
OK ✓

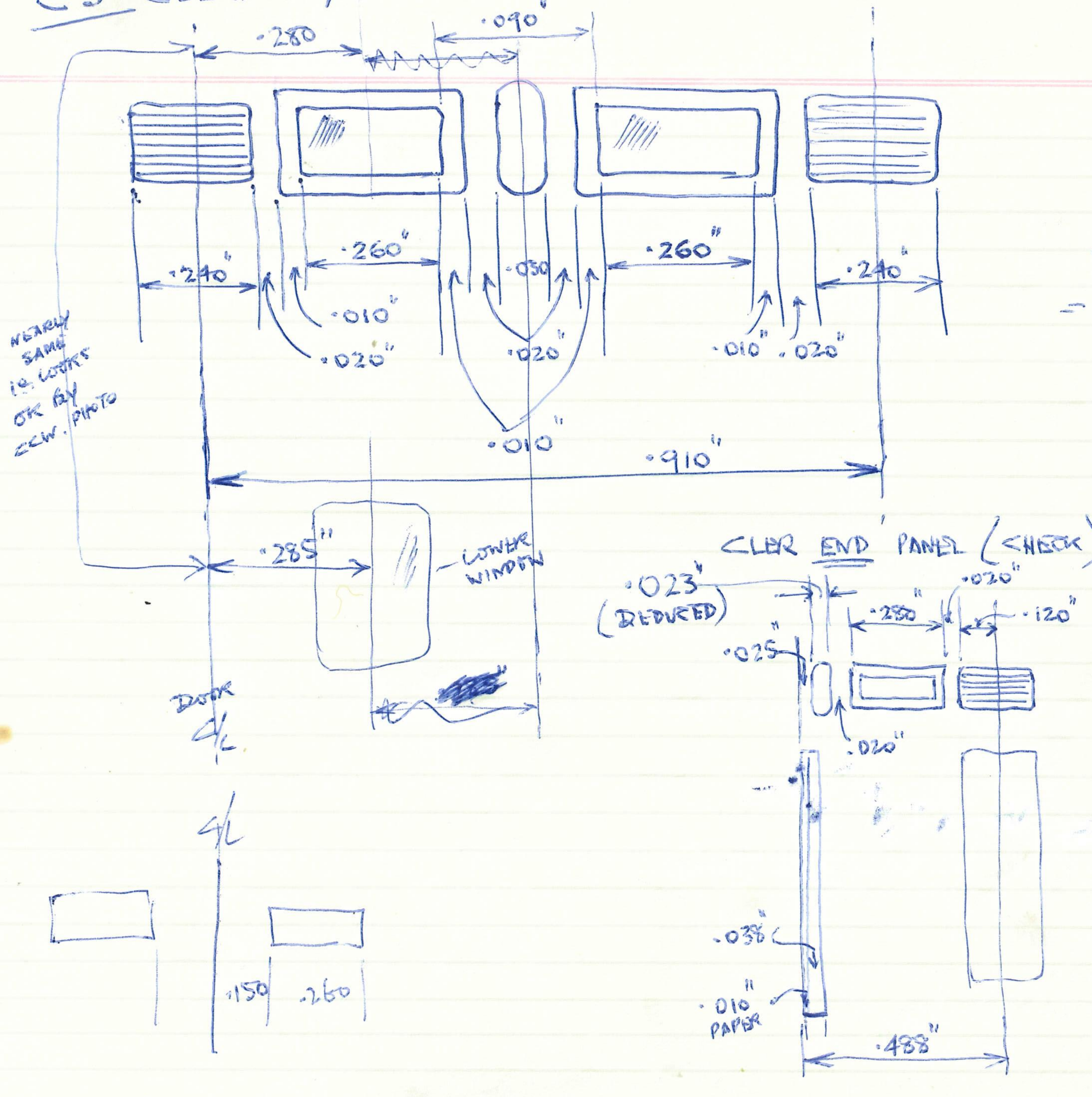
.175
.781
.956

1.025
.956
.069 OK. will avoid having to recess roof.

FINALLY !!
ONLY HAD .166" THK SHEET IN STOCK — CUT TO 1 1/16" WIDE ✓
& then to 20 m/m LENGTH ON FOOT SAW,
USING STEEL JIG AS GUIDE (VG)

M.O. 21 m/m then cut on line is OK.

C3 CLERESTORY ROOF LIGHTS



·240
·040
·020
·520
·020
·040

·880 from ·910

= ·030" PANEL.

= 2¼" LOOKS OK FROM CCW BOOK PHOTO.

·120"
·020
·280
·020
·025

·465 from

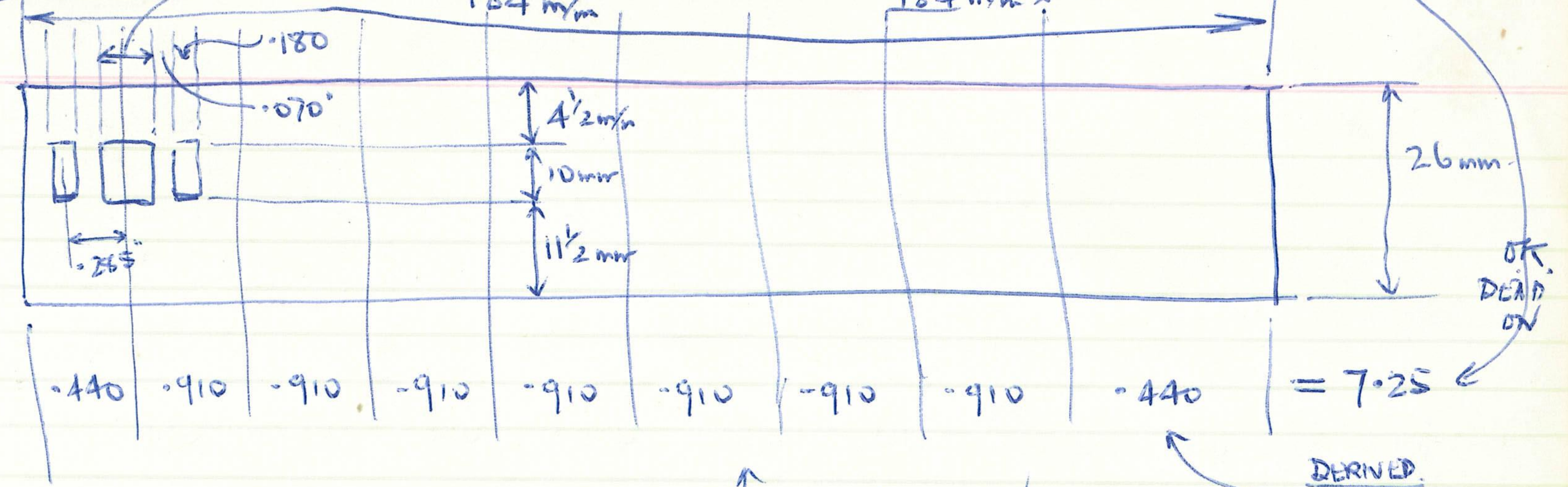
·488

= ·023" (1¾")

LOOKS DEAD ON FROM CCW PHOTO

C3 SIDES

46'-6" without mouldings = 186 m/m.
less 2 ENDS & GLUE 2
184 m/m × .0394 = 7.2496"



SEE OTHER DETAILS THESE GIVE 6" PANEL ✓

DERIVED.

3'-1" FROM DIAG.

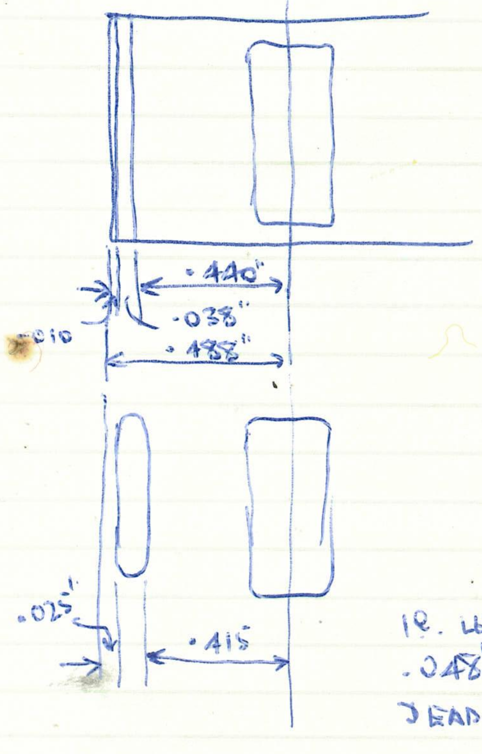
LESS MOULDINGS 3/8

3'-0 5/8 = .480

less .036" PLY + GLUE .038

SAY .440 ✓ .442

CHECK ON END PANEL



I.E. LEAVES
.048" PANEL = 3¾" - LOOKS
DEAD ON FROM CCW. PHOTO

C3 & C4

USING DIMENSIONS EST. FOR DIAG E26 BRINGS PANELS ~~[illegible]~~ AS FOLLOWS eg.

MY PUNCHES ARE ·062" ·040" & ·025"

C3 & C4 MODELS

C3. DOOR CENTRES = 5'-9¼" = ·908" LESS ·285 × 2, ·090 × 2, ·045 × 2 } = ·840"

-·840

·068 = 5¼" PANEL — SHOULD BE ABOUT 6" PER CCW BOOK

C4 DOOR CENTRES = 5'-7⅞" = ·890 LESS

-·840

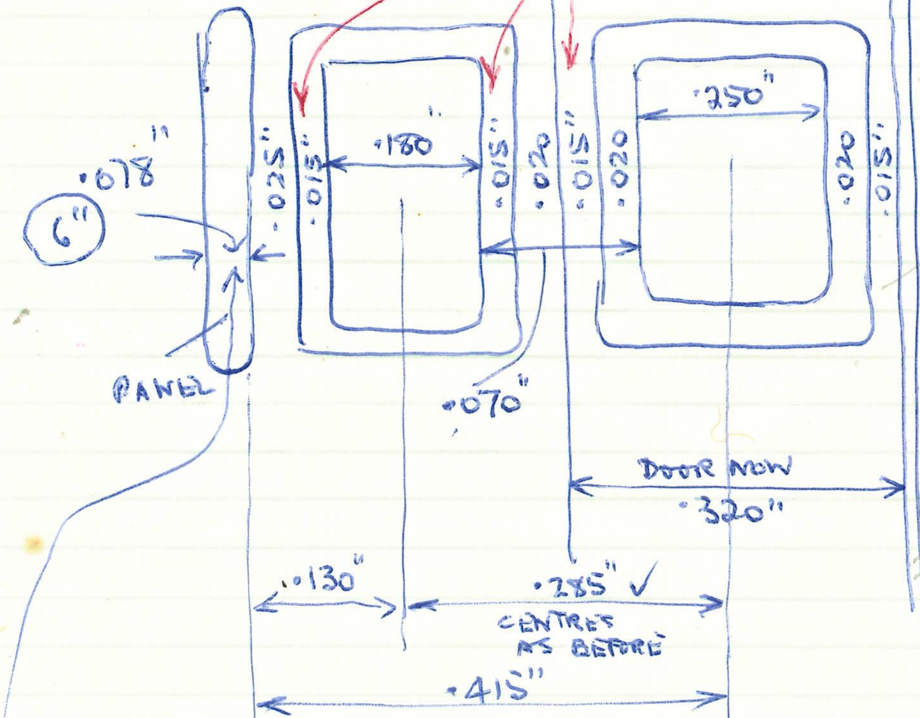
·050" = 3¾" PANEL — LOOKS TO BE ABOUT 3½" ON DIAG PHOTO 13/32.

NR. ENOUGH?

Binn's dwg 83004 shows these at about 2¾" inside panels I think these are just too narrow. (decide on 3" ·040") PUNCH AVAILABLE

FOR C3 USE:-

THESE CHANGED FROM STDS. USED ON E26.



∴ PANEL = ·908
LESS ·830 (ie. ·415 × 2)
·078" = 6" PANEL DEAD ON

✓ OK.

THESE DIMS ARE ALSO DESIGNED TO BE MORE SIMPLE ie. ELIMINATE eg. ·0125"

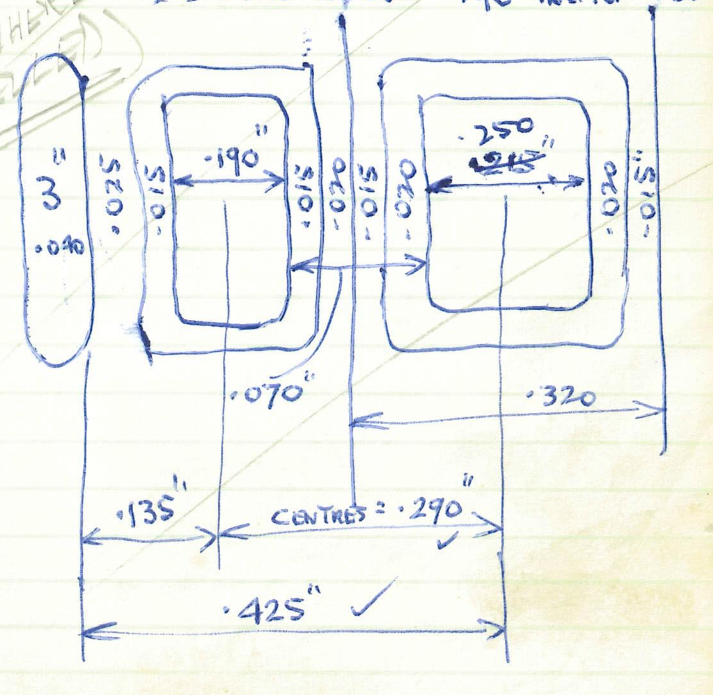
C4

THUS:- WITH ·040" PANEL WE GET:-

·890" DOOR CENTRES
less ·040
·850 ÷ 2 = ·425" INSTEAD OF ·415 ON C3.

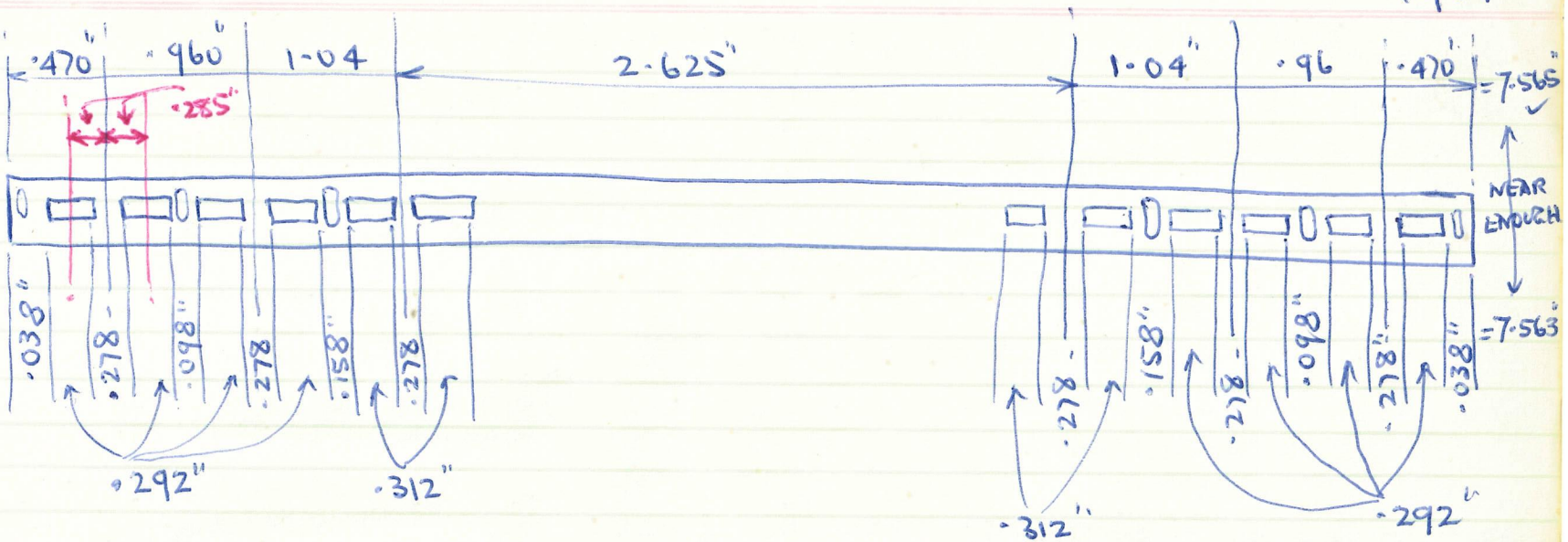
∴ MAKE WINDOW ·190" INST. OF ·180"

SEE FULL DETAILS ie ELSEWHERE (CANCELLED)



CLER CUT OUTS.

E26
MODEL
1964



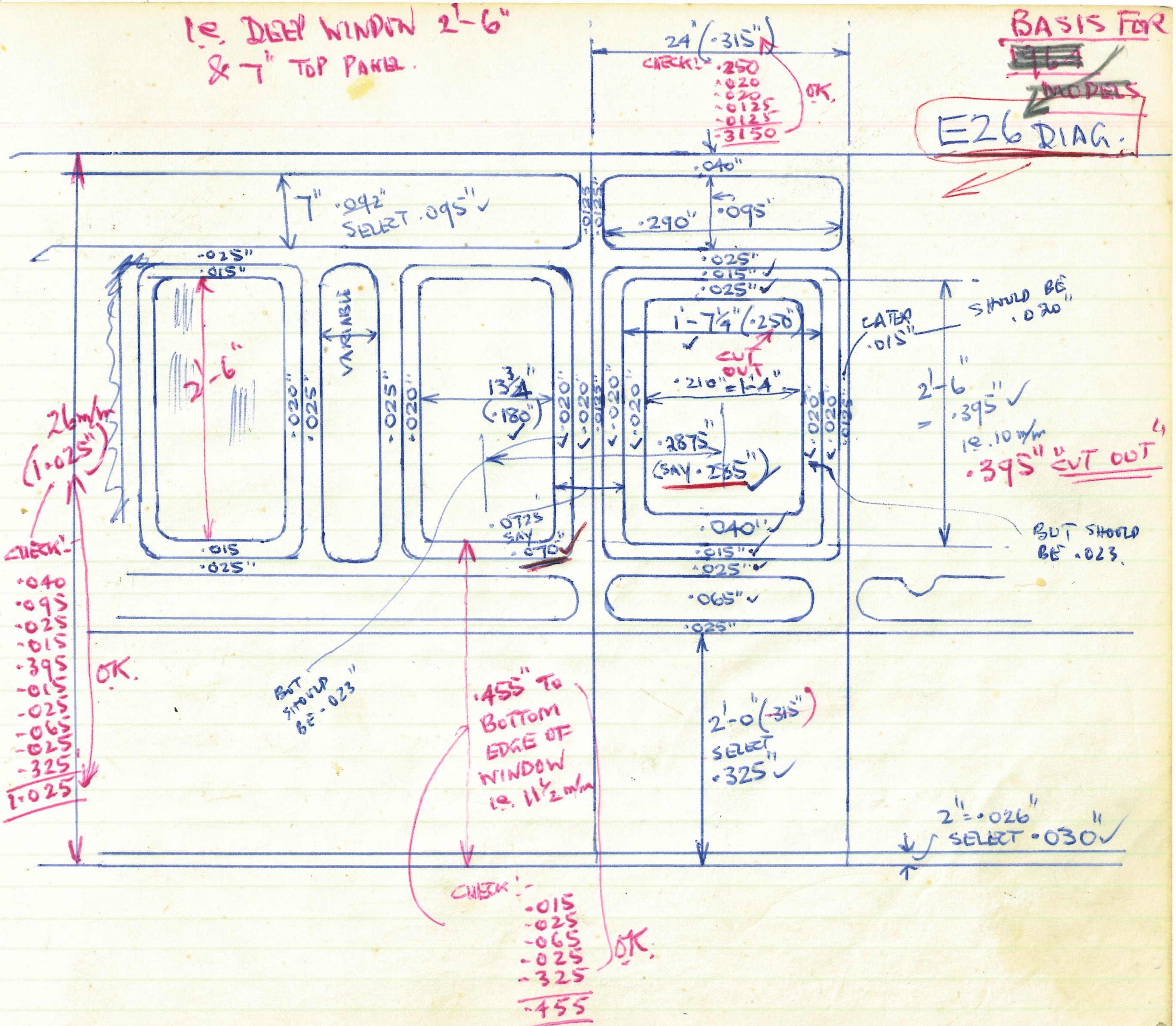
NOTE ON DWG 35094 THE ℄ LINES OF CLER LIGHTS ARE COINCIDE WITH ℄ OF LOWER QUARTER LIGHT. ON THE END TWO CPTS AT EACH END IE. 2ND CLASS. (THIS DECIDES DIM. .285" ABOVE). SEE DWG 35094 (E26)

THUS AS 2ND CLASS CLER LIGHTS ARE KNOWN AT .292", THIS GIVES THE DISTANCE BETWEEN CLER. LIGHTS AT .278" ABOVE (THIS LOOKS ABOUT RIGHT ON DWG 35094

THUS USING .278" AS STD THROUGHOUT (FOR BOTH 2NDS & 1STS - AS EVIDENT ON DWG) & USING THE LONGER CLER LIGHT FOR 1STS OF .312", WE GET THE DIMS ABOVE (Rough check, indicate that clerestory panel width (various) come in line with DWG near enough

BUT SEE NOTES ON CLER CONTROLS (MECH CONG) " LIGHTS ARE ABOUT 2" APART ON 2NDS & THIRDS (IE. .315")

SUGGEST PROCEED WITH MY OWN DIM OF .278" AS IT LOOKS RIGHT. ON DWG 35094



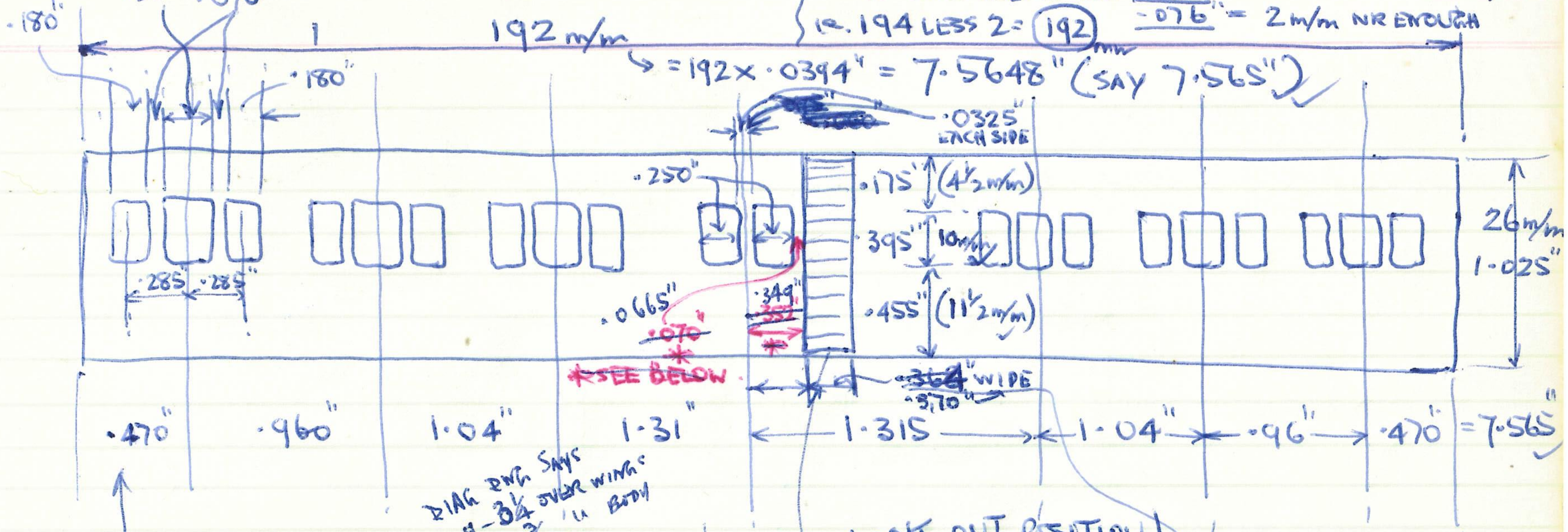
ie. DEEP WINDOW 2'-6" & 7" TOP PANEL.
BASIS FOR 2 MODELS
E26 DIAG.
24" (·315")
CHECK! ·250 ·020 ·020 ·0125 ·0125 ·3150
OK.
·040"
7" ·092" SELECT ·095" ✓
·290" ·095"
·025" ·015"
·025" ·015" ·025" ✓
VARIABLE
2'-6"
·020" ·025"
·025" ·020"
13 3/4" (·180") ✓
1'-7 1/4" (·250") ✓
CUT OUT
·210" = 1'-4"
·2875" (SAY ·285") ✓
·0725 SAY ·070" ✓
LATER ·015"
SHOULD BE ·020"
2'-6" ·395" ✓ ie. 10 m/m
·395" "CUT OUT"
BUT SHOULD BE ·023.
·040" ·015" ·025"
·015 ·025"
·065" ✓
·025"
26 m/m (1·025")
CHECK:- ·040 ·095 ·025 ·015 ·395 ·015 ·025 ·065 ·025 ·325 1·025
OK.
BUT SHOULD BE ·023"
·455" TO BOTTOM EDGE OF WINDOW ie. 11 1/2 m/m
2'-0" (·315") SELECT ·325" ✓
2" = ·026" SELECT ·030" ✓
CHECK:- ·015 ·025 ·065 ·025 ·325 ·455
OK.

COMPO E26
MODEL (1964)

LONG WINDOWS 2'-6"

48'-6¾" LONG

48'-6" WITHOUT MOULDINGS
= 194 mm LESS :-
2 - PLY ENDS @ .036 = .072"
2 - GLUED FACES @ .002" .004"
.076" = 2 m/m NR ENOUGH
i.e. 194 LESS 2 = (192) mm



DIAG DWG SAYS
9-3¼ OVER WINGS
8-0¾ " BODY
1-2½
2) 7¼

DERIVED - FROM :-

LOOK OUT POSITION

29½" OVER MOULDINGS -
(PROJECTS 7½" ON
8'-0¾" BODIES)
= .098"

.388" LESS 2 MOULDINGS ×.008" & ×.001" GLUE
.018"
.364
.370

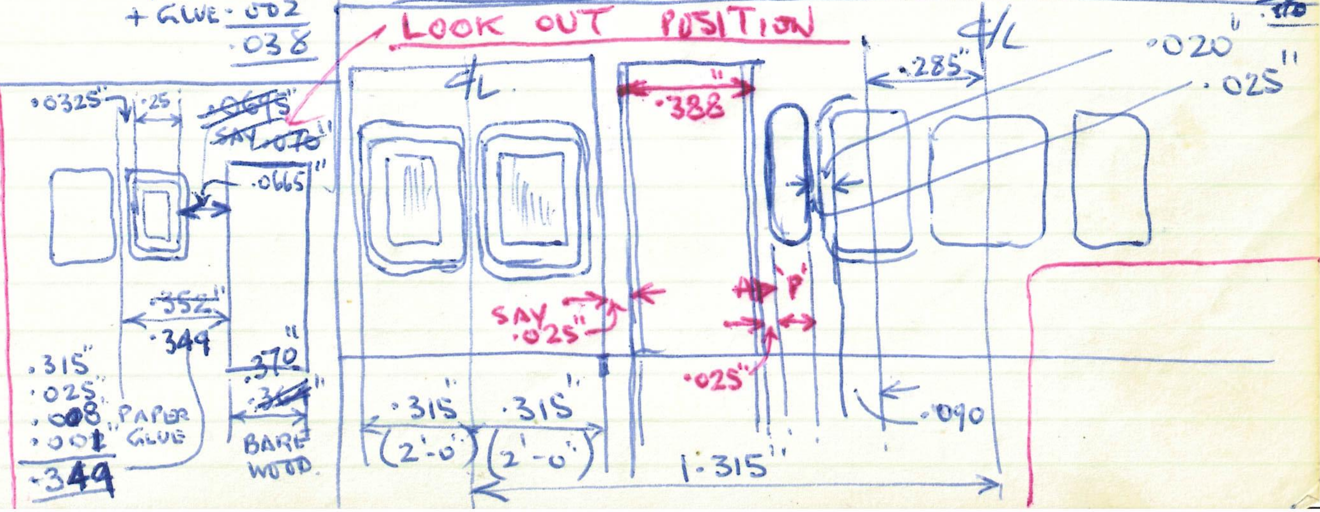
DWG GIVES 3'-3⅛" OVER MOULDINGS (.514")
= 3'-2¾" WITHOUT " (⅜" THK MOULDINGS)
= .5088" LESS END PLY @ .036
.0380 + GLUE .002
.4708 .038

∴ CUT WOOD .370" (.364) WIDE × .098" THK ✓✓

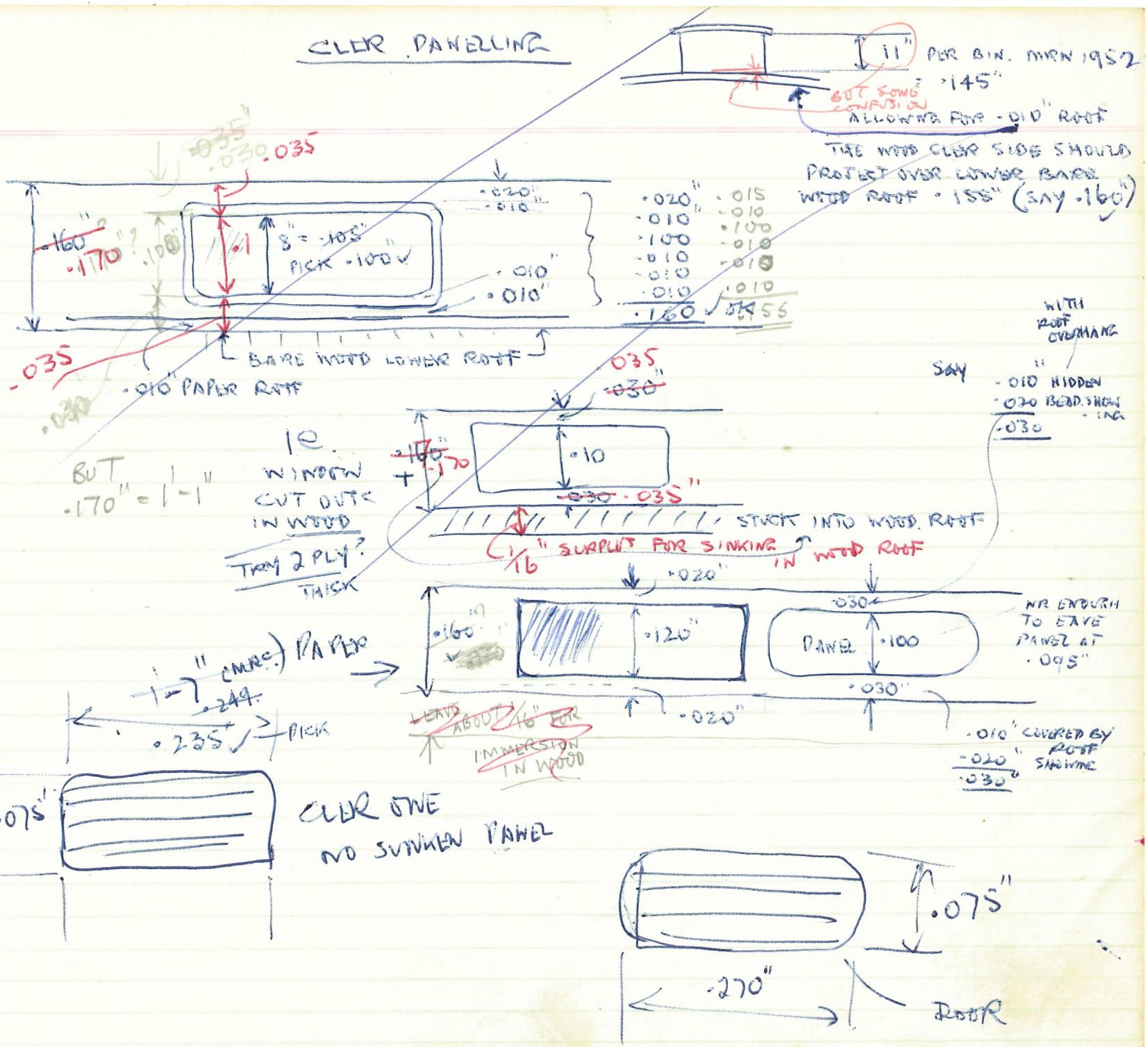
CHECK ON PANEL 'P'

.315 DOOR
.025 ✓
.388 ✓
.025 ✓ 'P'
.025 (T)
.020 ✓
.090 ✓
.285 ✓
1.173

1.315
LESS 1.173
.142 = 'P'
= 10¾" PANEL
OK. AS IT SCALES APPROX 10¼"



CLEAR PANELLING



NOTES ON CLEREST. COACHES (MICH. CONN)

CLER LIGHTS = 20" x 8" DEEP (3RD CLASS CPT) MRN 1952 P183.

IT IS RARE TO FIND A LAMP (DURING CLER PERIOD) ON C/L OF PAIR OF D. DOORS
ALMOST INVARIABLY IT IS ON THE C/L OF ONE OR OTHER LEAF OF A PAIR.
NOTE THE LAMP IN THE GDS CPT. IS MIDWAY BETWEEN THE PARTITIONS.

WINGS:- PROJ. IS. $7\frac{1}{2}$" ON $8'-0\frac{3}{4}$ BODIES. & $4\frac{1}{4}$" ON $8'-6\frac{3}{4}$

TRAIN ALARM SIGNALS:- ALWAYS FITTED AT THE END FARTHEST FROM THE VAN, IN ANY PASS. CARR. WITH A GDS CPT.
ON CORR TRAINS WITHOUT A VAN, THEY WERE FITTED AT THE RH. END LOOKING AT THE CORR SIDE.

MRN 1952 P183

CLER LIGHTS ON 55' COMPO ($8'-6\frac{3}{4}$" CORR.) ALL LIGHTS WERE DIFFERENT LENGTH FOR EACH CLASS. THO' ALL WERE 8" DEEP.

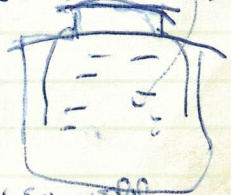
1STS = $1'-11\frac{3}{4}$" (·312") 2NDS $1'-10\frac{1}{4}$" (·292") 3RDS $1'-8$" (·262")

~~·315~~ ·315"

about 2' APART ON 2NDS & 3RDS
" $2'-2$" " ON 1STS.

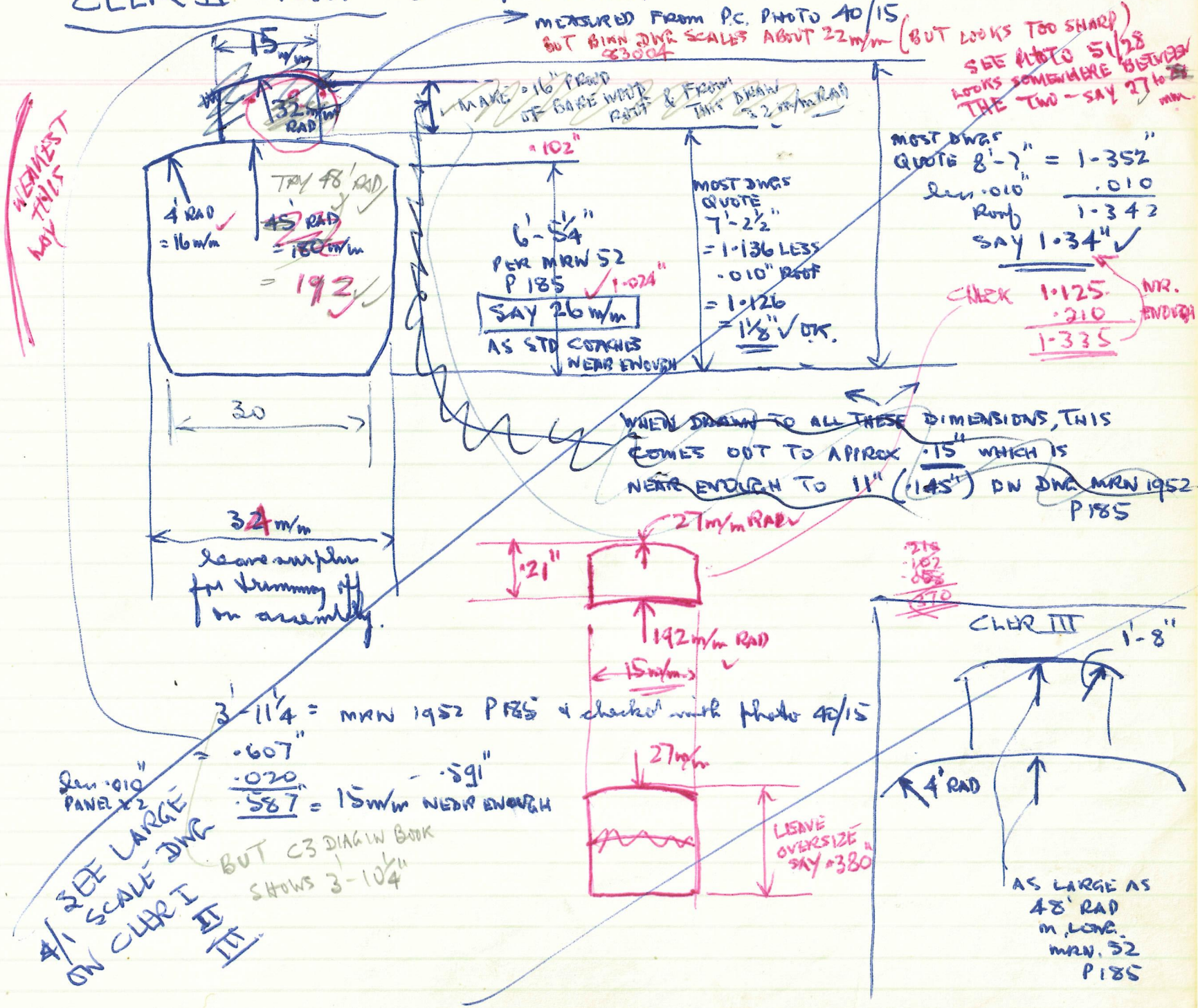
·407

MRN 1953 P.156:- STEPS & HANDRAILS ARE ON THE VAN END (SEE DWG OF END!)



ALSO OFF END IN MRN 53 P80

CLER II ROOF 8'-0¾" WIDE BODY



10 PARCEL VAN 1964

8'-0" WIDE = 1·260"

LESS ·036" (6 THICK)

6

·216

+ ·012" (ALLOW FOR 6 GLUED FACES)

·228"

WRONG ON TRIAL TOO NARROW

SEE ELSEWHERE

ie. 1·260

LESS ·228

1·032 = 1 1/32"

1 1/32"

PRETTY AS BEFORE MAR

·0325

158 m/m & ·002 x 2 (GLUE) = ·076" OFF = 2 m/m OFF

160 m/m LESS ·036 x 2

1964

·175"

4½

10

11½

21

·405"

·445"

10 m/m ·375"

·455

·365"

·250"

26 m/m

1·025"

32 — 47 m/m — 47 m/m — 32

3 RAD. ROOF

7'-6"

ie. 30 m/m 12/63.

& 30 m/m 12/95

GIVES 92 m/m

SAY 10½ R

+ 11 m/m.

92

SAY 86 m/m.

SEE MRM 1953 P206

DECIDED ON 26 m/m (1·025").

MOST DINGS = 6'-4½"

(25·5 mm)

25 m/m

25·5 m/m

ie

SEE EDWARDS DWG 12/63.

ED. DWG 12/95

R.M. 1957 P164

158 m/m

·150"

·475"

·400"

·650"

26

32 — 47 m/m — 47 m/m — 32 m/m

12 — 12 m/m.

·350"

158

CUT WIPER SAY 36 m/m THEN TRIM OFF SURPLUS. to 32 m/m.

100 m/m RAD ON ED. BRGS. 12/63.

96 ---------- 12/95

86 ---------- RM 1957 P164

12 m/m RAD ON ED BRGS 12/63

11½ " ---------- 12/95

10½ ---------- RM 1957 P164

·175"

·405"

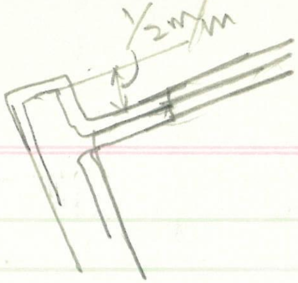
·445"

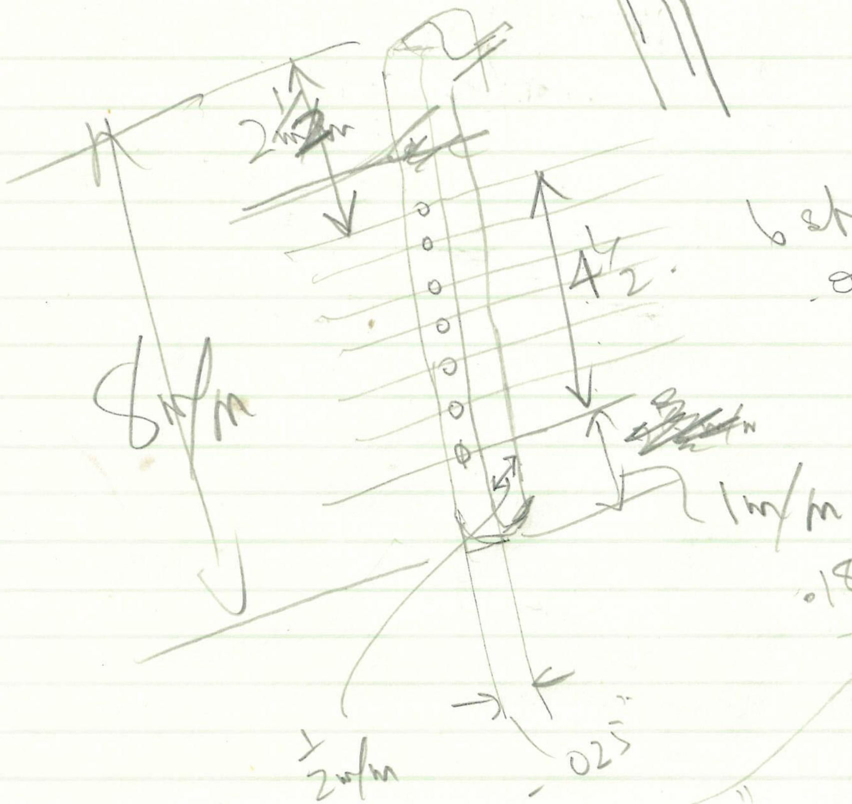
·150"

·475"

·400"

·350"



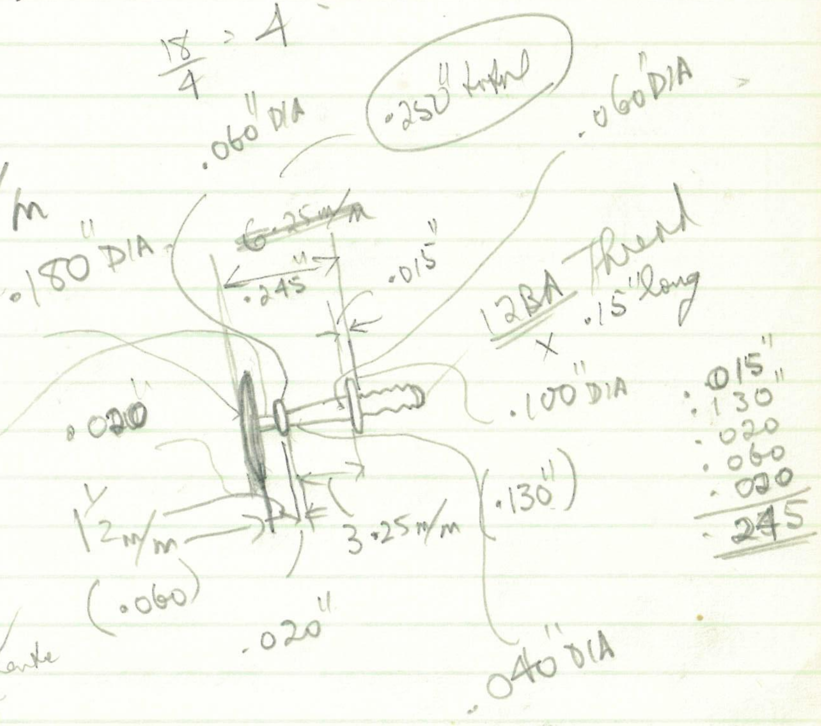


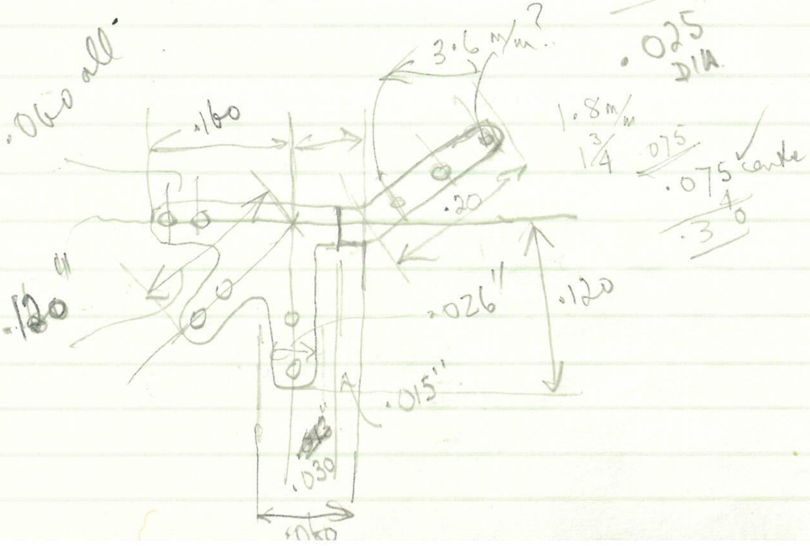
5 spaces in 4½ m/m

5)180
36

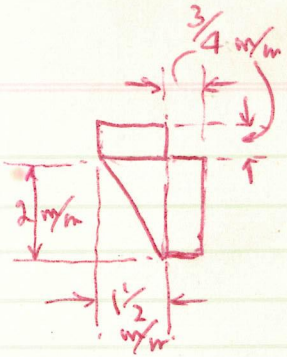
6 spaces on 3/4 m/m × 6

18/4 = 4½





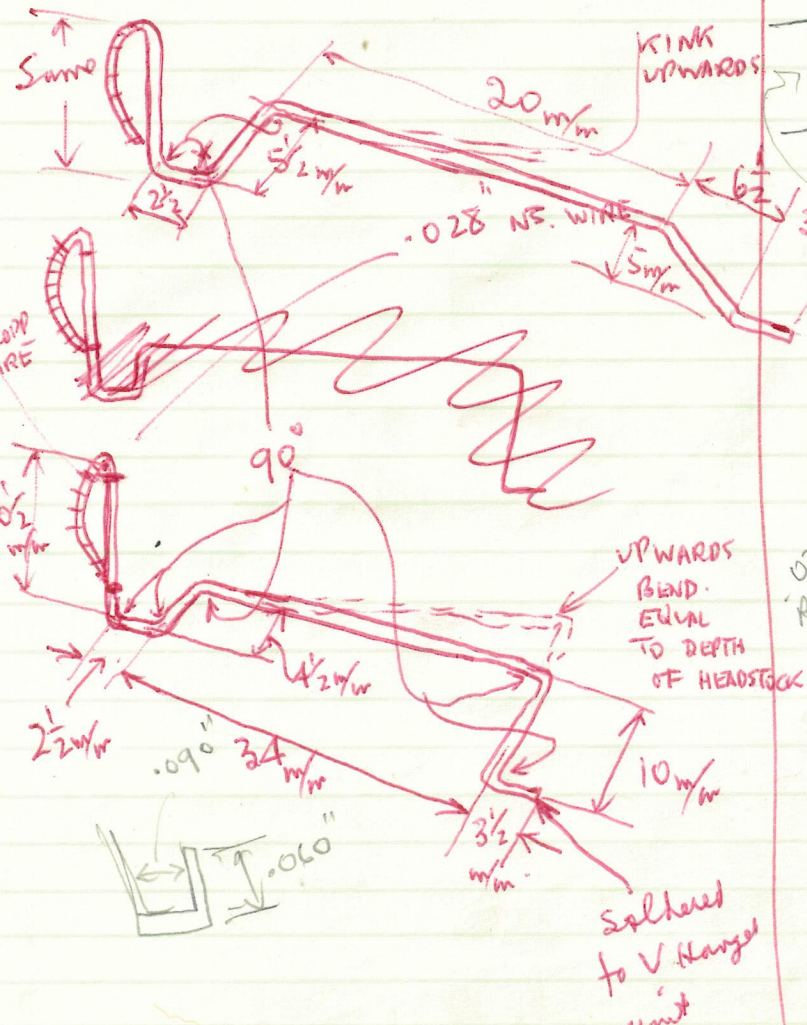
Siphon B
1963

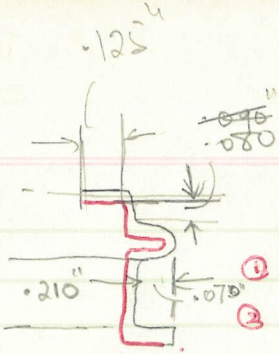


Siphon Gussetts

2 - off LH.
2 - " RH.

.005" NS. STRIP × 3/8" WIDE
BEND WITH FINE "STRAIGHT" PLIERS.





6 - off Footboard Supports

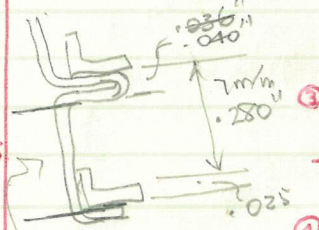
USE .018" NS. WIRE.

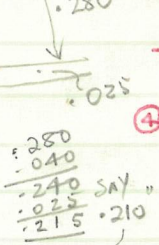
① Bend 90°

② Place in hole in wood (drilled .022" dia) drilled 2 3/4 m/m from edge & Bend 2nd 90° Bend

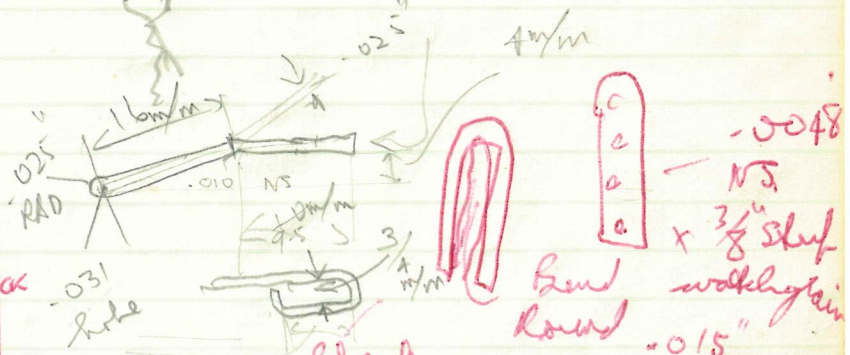
③ Bend with tapered pliers

④ Then final bend with Duck Bill Pliers 6 m/m from (using rule)





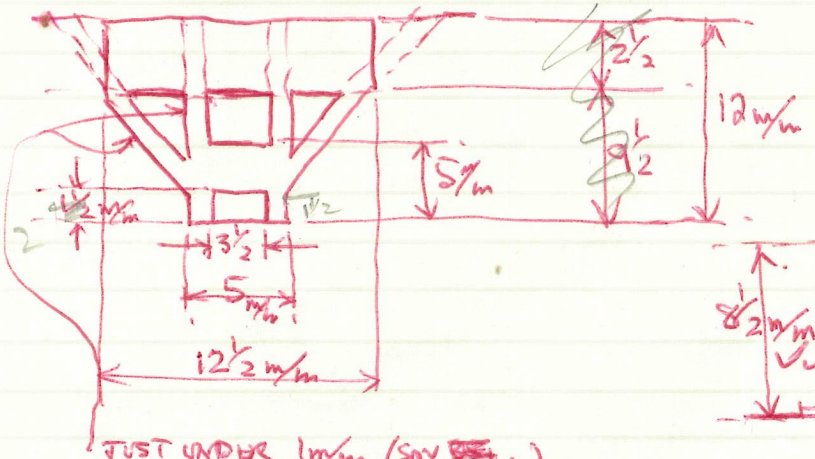
.007 Tinned Copper Wire



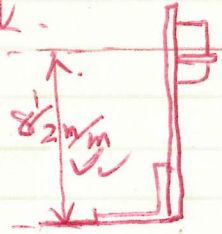
W IRONS

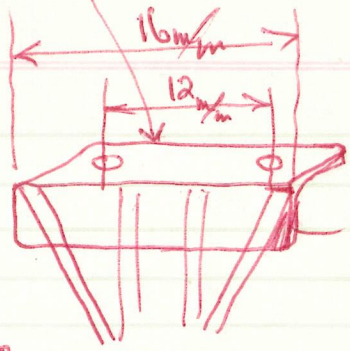
USE .015" NS.

USE MARKING OUT TEMPLATE

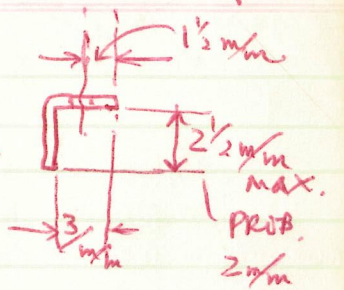


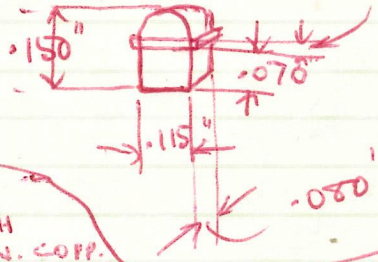
JUST UNDER 1m/m (SAY ~~.035~~ .035")



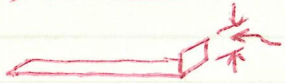


4W SIDDELEY B 1963





① BEND AT 90°



SAME AS WIDTH OF .067" TIN. COPP. STRIP (USE STRIP AS GAUGE)

② BEND ROUND 6" RULE (.032" WIDE) USING THE 6" RULE & 12" RULE BUTTED TOGETHER ON STEEL BLOCK TO GET GOOD SQUARE BEND THUS:-

③ THREAD ON SPRING LEAFS & PLACING ON STEEL BLOCK AGAIN & HOLDING DOWN WITH GRAM NEEDLE & PRESSING AGAINST 12" RULE, COMPLETE THE BEND & CUT OFF SURPLUS

④ CLEAN BACK WITH EMERY & SOLDER (HOT IRON)

⑤ MEASURE BTM LEAF TO 5 m/m USING BR. M.O. WITH GRAM NEEDLE & CUT OFF EXCESS

⑥ NEXT " 8 m/m

⑦ " 11 m/m

⑧ " 14 m/m

⑨ " 16 m/m

⑩ TOP " 22 m/m

⑪ SQUEEZE TOGETHER WITH SMCK. B. PLIERS, THEN CURVE SPRING TO REQD SHAPE & CURL BOTH ENDS.

SPRINGS

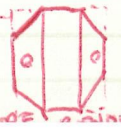
USE TINNED COP. STRIP

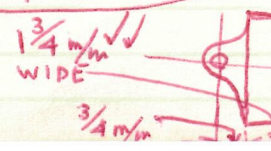
.067" × .006" (6 LEAFS)

WRAP WITH NS. .0048" × .050" WIDE (CUT FROM 3/8" WIDE STRIP)

(WHEN THE ENDS ARE CURLED THIS GIVES JUST 18 m/m (i.e. 4-6 SPRING)

REMOVE 4 CORNERS WITH TINSNIPS THEN USE ROUND FILE



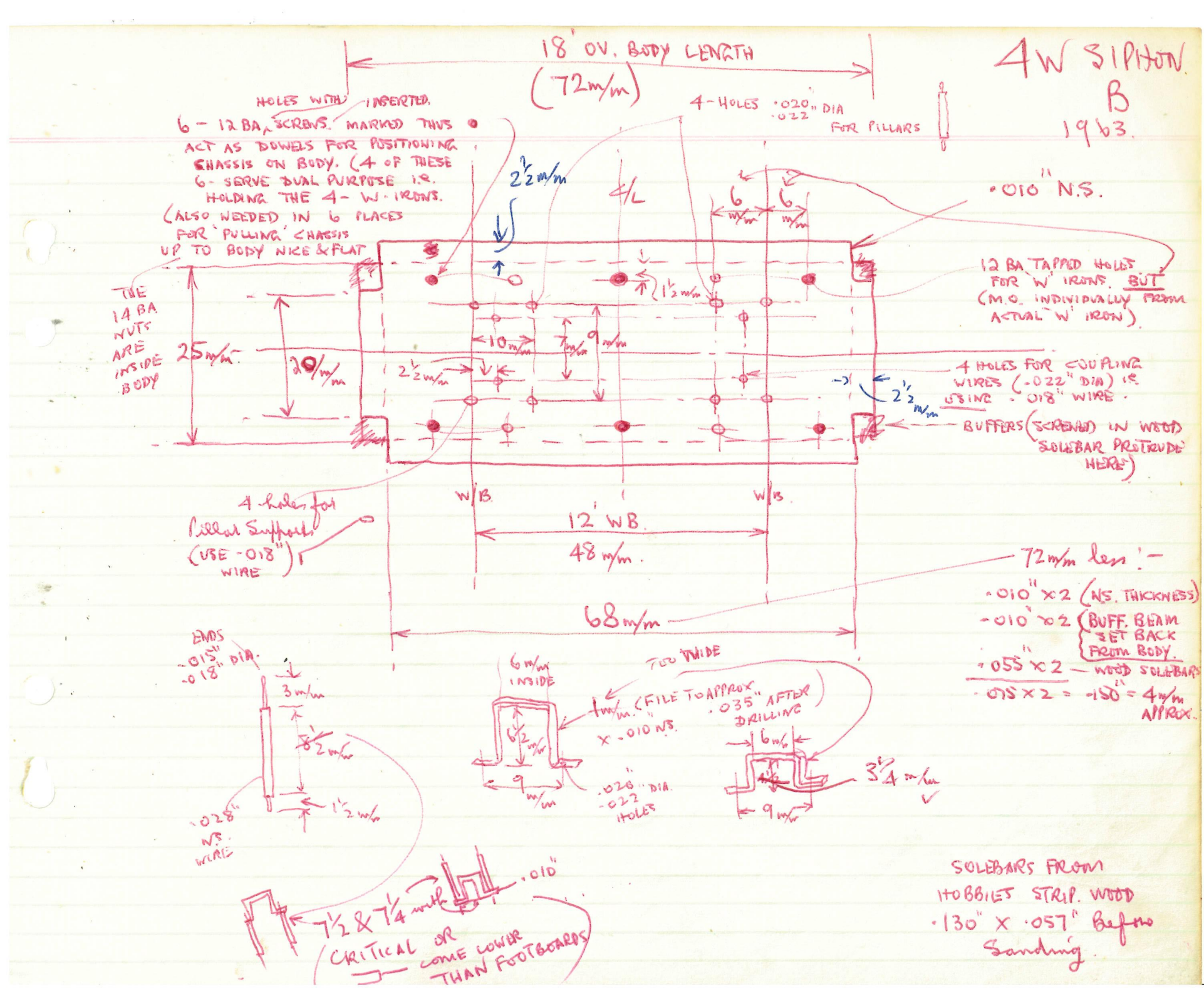


SPRING SUSPENSION

USE .0048" × 3/8" NS. STRIP. (WATCH GRAIN FOR BENDING)

SAY .025"

4W SIPTON B 1963.



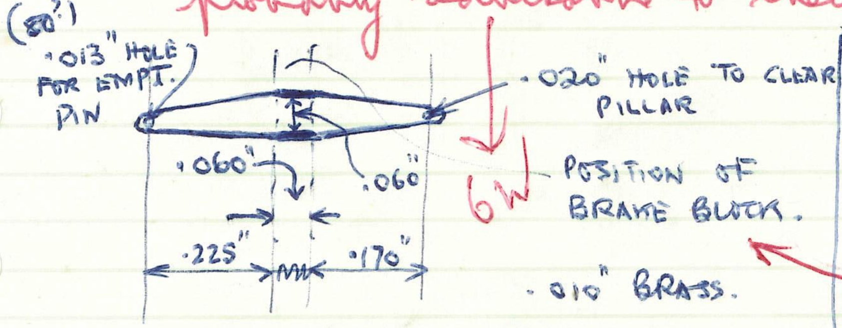
72m/m less :-

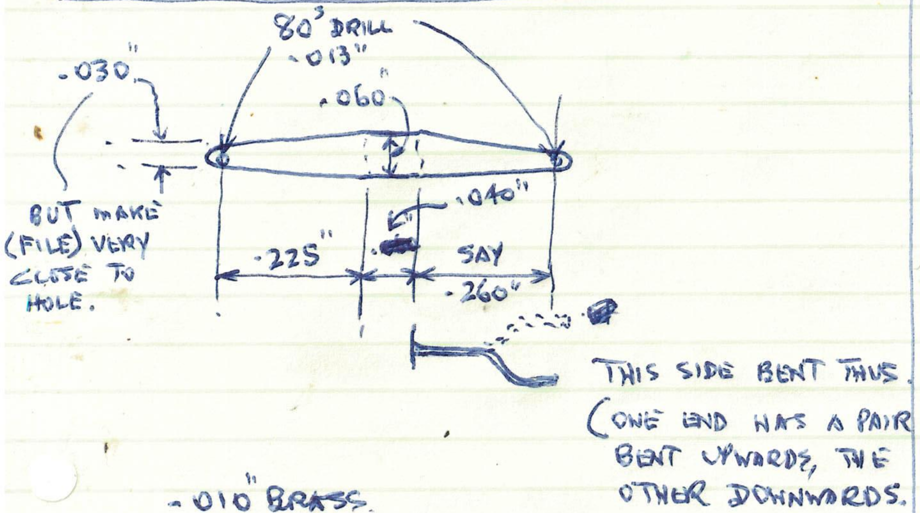
.010" x 2 (N.S. THICKNESS)
.010" x 2 (BUFF. BEAM SET BACK FROM BODY.
.055" x 2 — WOOD SOLEBARS
.075 x 2 = .150" = 4m/m APPROX.

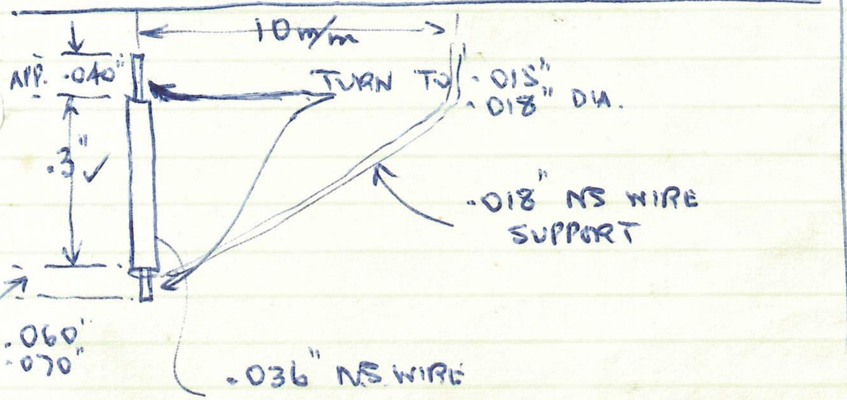
SOLEBARS FROM HOBBIES STRIP. WOOD .130" x .057" Before Sanding.

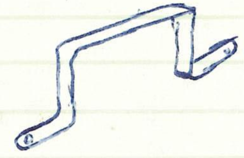
OUTSIDE RUDDED
BRAKE GEAR
(SIPHON 6W 1963)

Note'- Not absolutely certain that all these dimensions were used as shown - probably advisable to check with actual model for certain.





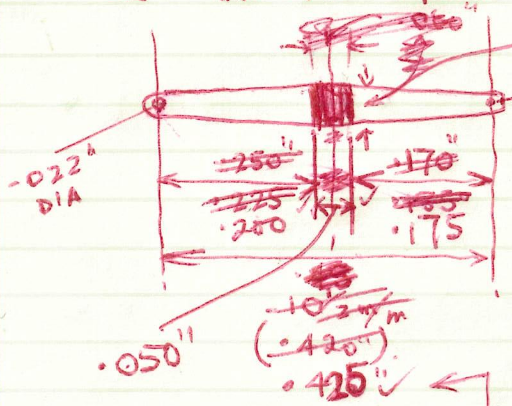




HAMBLINGS BOILER BAND.

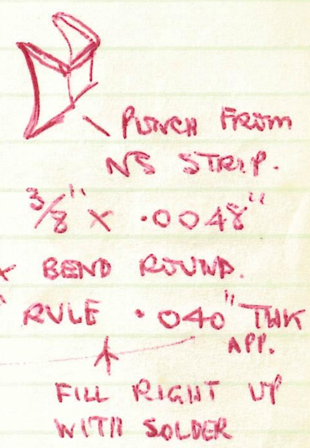
4W - DIFFERENT FROM 6W AS 4W HAS THIN NS. W IRONS

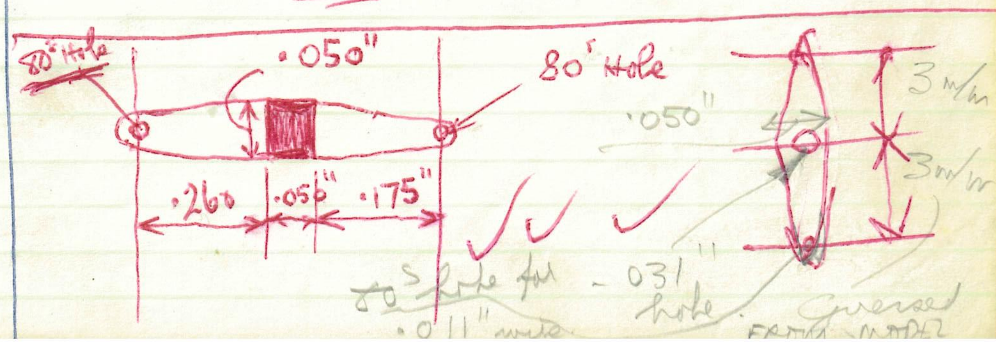
For 4W Siphon B (~~13M.~~ 16·5) used:-



CHECK. I.e.

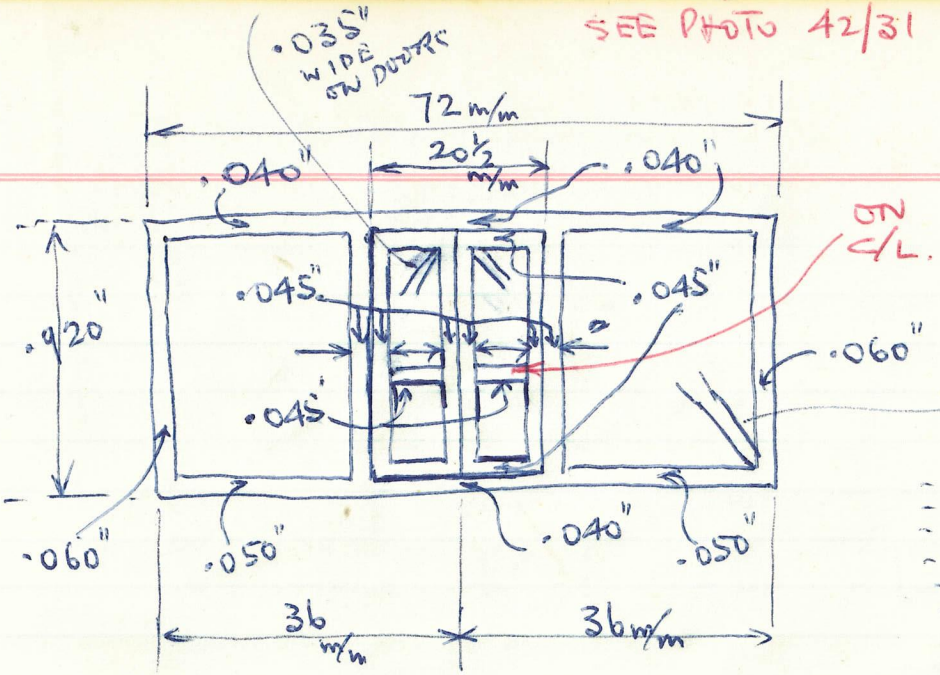
·200
·175
·040
·0048"x2 = ·010 APP.
·425 OK.





4W SIPHON B'

SEE PHOTO 42/31



CTN C/L.

USE 2 m/m PLY AS BASE.

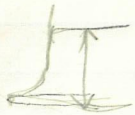
.045" WIDE (LET IN SEPARATELY)

.040	
.067	
.095	
.052	
.095	
.052	
.095	
.052	
.095	
.052	
.140	
.035	
.050	

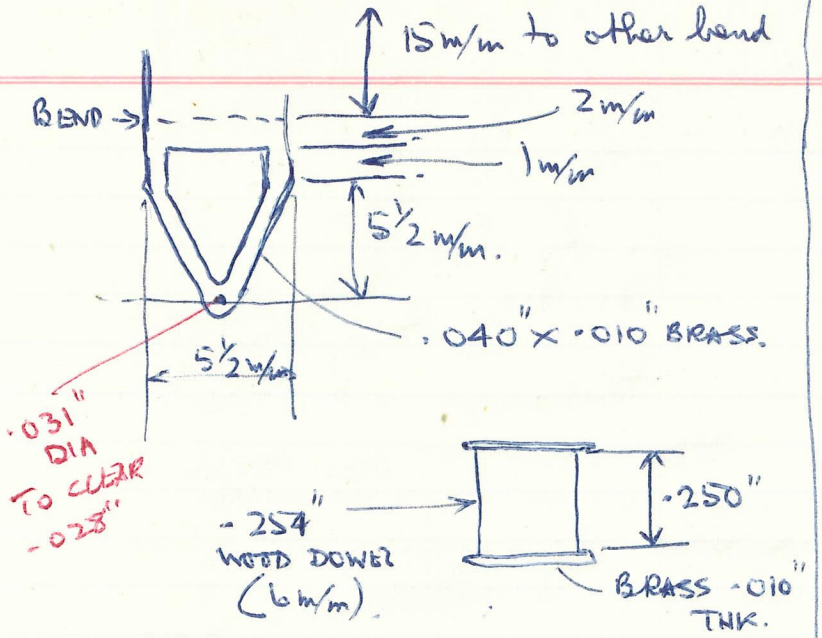
= .920"

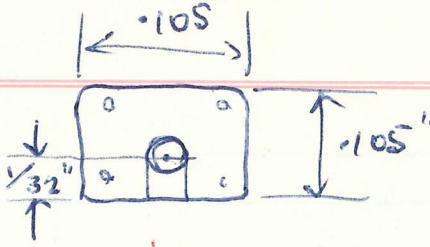
DIMENSIONS SCALED FROM PHOTO

NOTE:- DIFFERENT THAN 6W SIPHON (ONLY BTM PLANK IS WIDER THAN OTHERS (MUCH).



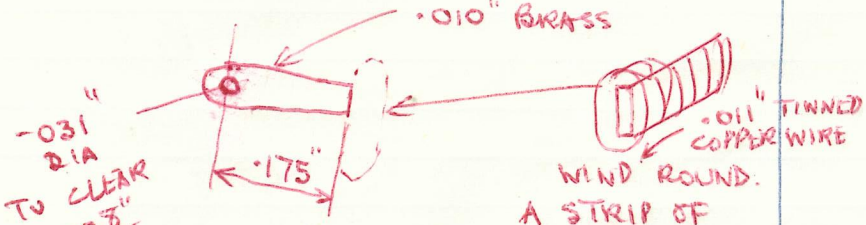
GW SIPHON 1963





FROM .004" x 1" Copper Strip.
Drill .028" DIA Hole & then cut with SOT Piercing Saw

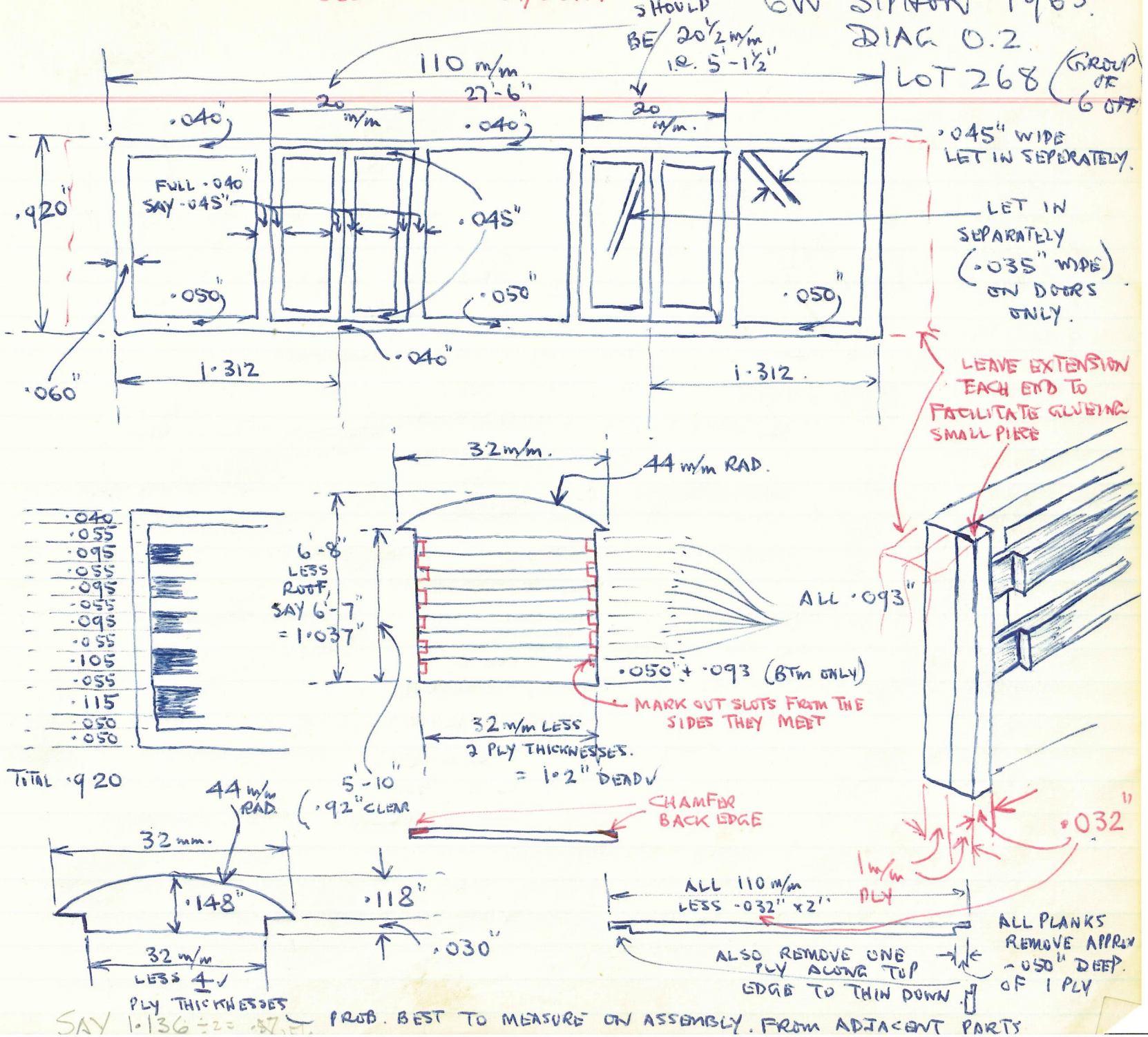
Bit doesn't the punch produce this shape?



WIND ROUND.
A STRIP OF
1/32" 3 PLY x
.120" WIDE
& SNIP OFF AS REQ'D

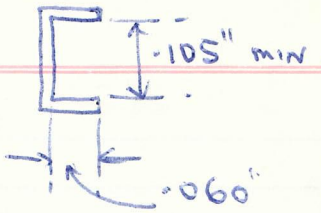
SEE PRINTS. 37/5 & 14

6W SIPHON 1963.
DIAG 0.2.
LOT 268 (GROUP OF 6 OFF)



SAY 1.136 ÷ 2 = .57" PROB. BEST TO MEASURE ON ASSEMBLY. FROM ADJACENT PARTS

SOLEBARS



COPPER STRIP.

.225" WIDE X .010" THK
.008"

WIDTH OF BLADE ON CIVILCOTIME IS OK
(HOLD DOWN WITH CELOTAPE WHILE CUTTING.

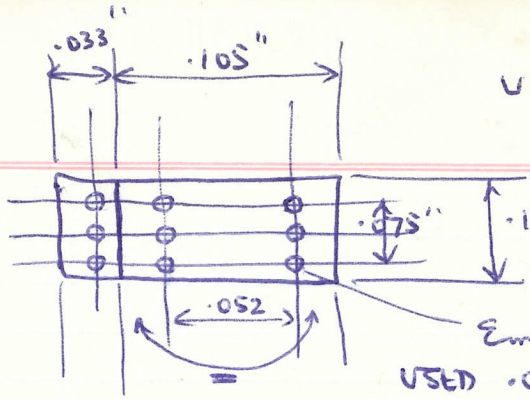
SIPHON 'G'
UNDERGEAR
ETC
1962

VAC PIPE (OUTSIDE THE SOLE BAR)

USE .030" COPPER WIRE FROM HEAVY CABLE (NEAR ENOUGH TO PROPER SIZE .0328" (2½" DIA ON PROT.

SOLDER TINY PIECE OF .003" BRASS STRIP (APPROX 1 mm WIDE) TO IMITATE JOINT

NOTE!- SOLDER IN POSITION IF POSSIBLE BEFORE STEPS ARE SOLDERED IN POSITION. & FILE INSIDE THE BENDS TO MAKE SURE IT GOES FLUSH TO SOLEBAR

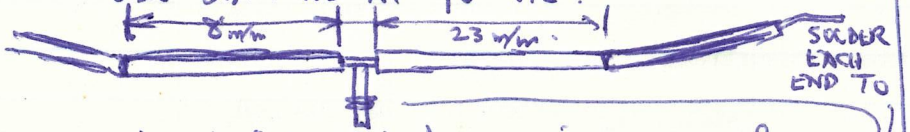


USED .003" BRASS STRIP x 7/16" WIDE

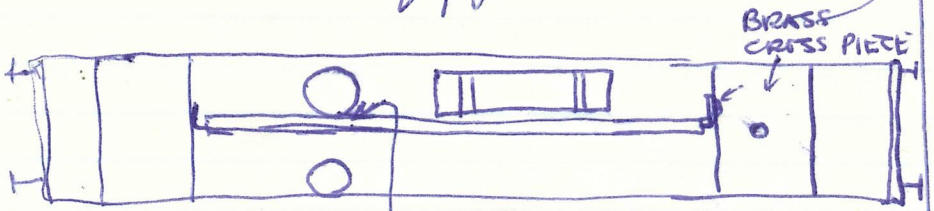
STEAMPIPE (AS ON SIPHON G OUTSIDE FRAMES 1962.

USE SINGLE STRAND WIRE COVERED IN WHITE SYSTOFLEX (EXTREME DIA .050") INT. WIRE IS .028" DIA.

① CUT WITH RAZOR IN CENTRE (IE. THE SYSTFLEX) & DRAW APART & SOLDER 3½ m/m LENGTH OF .028" DIA WIRE AT 90° VIZ.

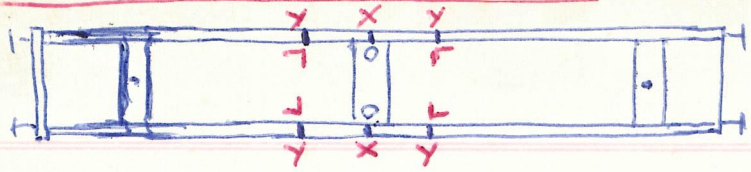


② Wrap 2 turns of fuse wire round here



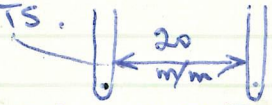
IMMEDIATELY ADJACENT TO TOP VAC CYLINDER & GAS TANK

SOLDERING QUEEN POSTS IN POSITION

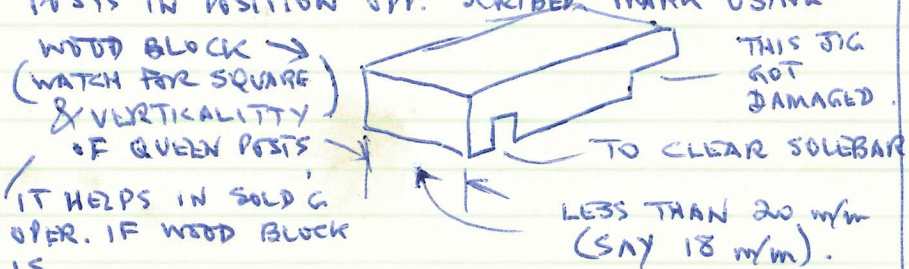


① WITH SOLEBAR UNIT DOWELLED TO BODY, SCRIBE C/L MARK ON COPPER SOLEBAR AT X "SIGHTING" THE POSITION CAREFULLY FROM C/L OF BODY.

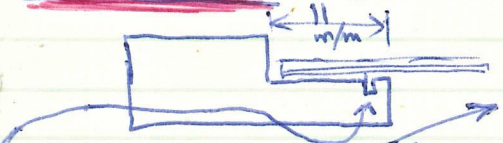
② MARK OFF & SCRIBE LINE ON SOLEBAR 10 m/m EITHERSIDE AT Y TO GIVE 20 m/m SPACING OF QUEEN POSTS.



③ SCREW DOWN SOLE BAR UNIT TO PLAIN WOOD BLOCK (4 - BUFFER HOLES CHIPPED OUT OF WOOD) & SOLDER 4 QUEEN POSTS IN POSITION OPP. SCRIBED MARK USING

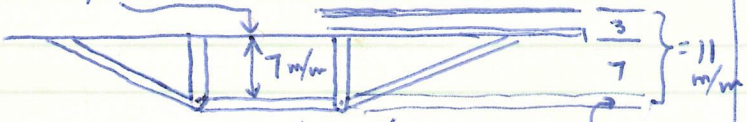


QUEEN POSTS (USE BRASS ANGLE).



ONLY IF QUEEN POSTS GO TO TOP OF SOLEBAR (IF OVER A SPACER = 11 m/m less .015" BRASS

① SAW TO 11 m/m (FULL) LENGTH IN JIG TO GIVE 7 m/m SPACING ON TRUSSES 1Ø.



② USING SAME JIG, SAW LEG OFF ONE FACE OF ANGLE BRASS & CLEAN UP WITH FILE

③ ADD SINGLE ERNET IN OTHER FACE

TRUSS RODS (ANGLE)

SIPHON G
INSIDE FRAMES
1962
ASSORTED CHASSIS ITEMS

① USING .008" COPPER STRIP M.O. FULL 2 m/m WIDTH & ADD (M.O.) ALSO, THE CENTRE LINE FOR BENDING ANGLE L (X APPROX 135 m/m LONG)

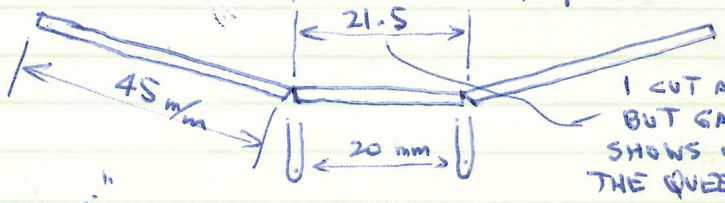
② AFTER CAREFULLY "SETTING" IN LONG 12" JIG BEND LIP OVER AT 90° (WITH HARD WOOD BLOCK)

③ TRANSFER TO BRASS JIG & RUB & FILE FLAT ON BOTH FACES.

④ USING PIECE OF STEEL STRIP. APP. 6" LONG x ½" WIDE X .035" THK, FILE EDGES THUS:-

BUT .035" leaves very little metal to file. - possibly try out copper cut to 2¼ m/m WIDE NEXT TIME.

CUT AS FOLLOWS (FOR 35' BOGIE CENTRES & 9'-0" BOGIES.



MAKING & FITTING STEPS TO SOLEBAR

① USING BRASS JIG  place in copper solebar with c/L mark opposite c/L MARK on copper channel (the latter having been lightly scribed in opposite c/L of Rod) and drill .018" hole (after 1st hole, place scrap piece of .015" brass wire thro' jig + hole to prevent movement while 2nd hole is drilled. NOTE!- POSSIBLY STEP WAS TOO HIGH ON THIS MODEL ------ → ------ STEP SUPPORTS

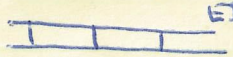
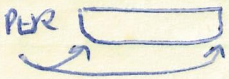
(2) Using .015" Brass Wire, bend ⌐ and then ⌐ using usual hole in 1 m/m PLY method (what distance?)  Solder brass wire in position at back of Solebar (PLENTY OF HEAT REQUIRED)

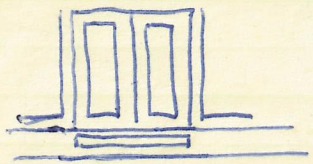
STEPS

USING STD PIPE LIGHTERS (.025" to .028")

① SAND THE WHOLE STRIP INCLUDING EDGES.

(2) CUT TO 2·5 m/m WIDE STRIP & SAND THE CUT EDGE

③ Mark off 27·5 m/m LONG  & CUT ON PENCIL LINE WITH SAT SAW. & RADIUS EDGES WITH GARNET PAPER 

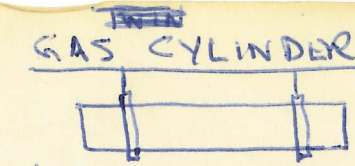


④ POSITION ON STEP SUPPORTS & M.O. 4 HOLES & DRILL No 80½ & GROOVE IN USUAL WAY

⑤ USING .007" TINNED COPPER WIRE, PREPARE STEPS IN USUAL WAY  & POSITION EACH ONE STICKING OUT FROM BODY ABOUT 1 m/m (MAX.)

NOTE AFTER CLINCHING TIGHT, SOLDER BEFORE CUTTING OFF THE SURPLUS WIRE THEN FILE BLOB & CLEAN UP WITH WEDGE FILE

GAS CYLINDERS



SIPHON G.
INSIDE FRAME
1962

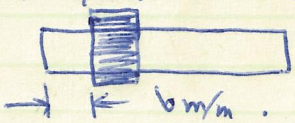
'0' GAUGE IS 10·5 m/m X 58 = 6 m/m X 33 (00 GAUGE) & 28 m/m ✓ ON OUTS. FRAME

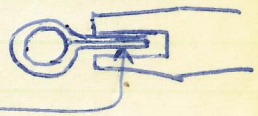
① CUT 5 m/m WOOD DOWEL TO 32 m/m LONG

(2) WRAP WITH LARGE REEL OF TAPE (CELLOTAPE – BIG REEL) (THE WIDTH OF THIS TAPE WAS THE LENGTH WRAPPED ROUND

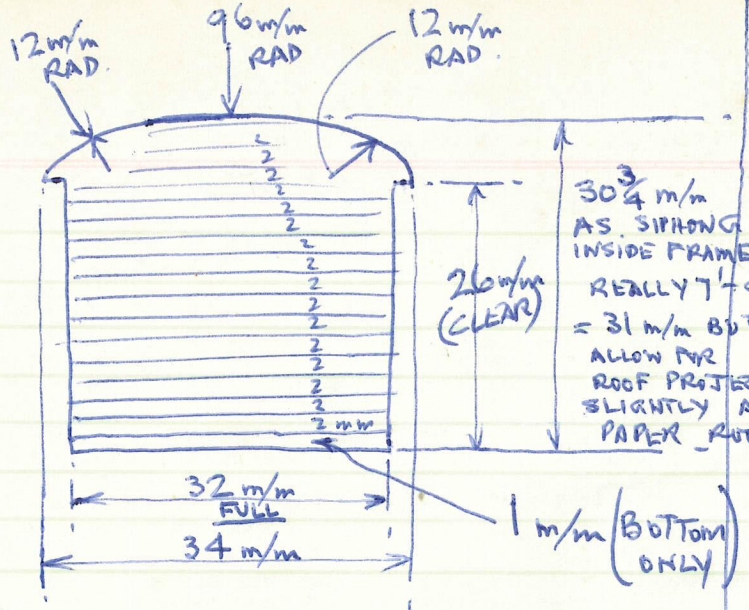
③ USING .008" COPPER X 33 mm WIDE WRAP ROUND DOWEL & M.O. FOR CIRCULAR LENGTH. THEN CUT & FILE AS REQ'D TO OBTAIN NICE BUTT JOINT

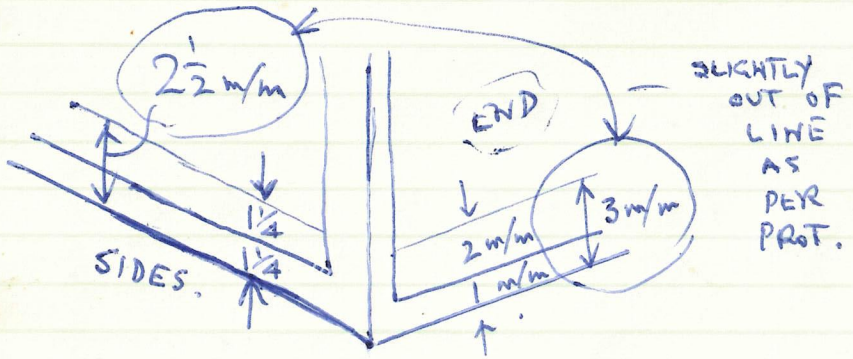
④ Roll copper strip round dowel & solder seam.

⑤ USING THICK CELLOTAPE (CUT PIECE TO APP. 2" LONG X ½" WIDE) WRAP ROUND CYLINDER AT 6 m/m FROM END. THUS:-  6 m/m.

⑥ USING BRASS BOILER BAND ROUGHLY WRAP ROUND CYL. & SQUEEZE. TIN INSIDE OF BOILER BAND & OUTSIDE OF CYLINDER. PLACE THEM TOGETHER & SQUEZING WITH PLIERS, SOLDER IN POSITION ALSO SOLDER THE ENDS TOGETHER 

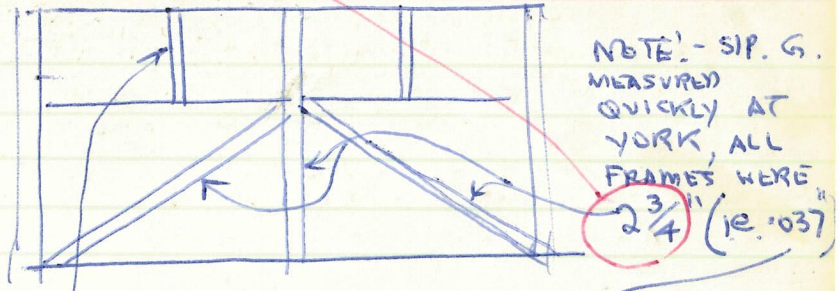
⑦ CLEAN UP & REMOVE SURPLUS SOLDER WITH FILE & EMERY.





BUT SEE LATER DIMENSIONS TAKEN AT STOKE CANON WHERE FRAMES HAVE A DISTINCT TAPER ON TO EDGE.

SIPHON G.
OUTSIDE FRAME
1962.



NOTE! - SIP. G. MEASURED QUICKLY AT YORK, ALL FRAMES WERE 2 3/4" (ie. .037")

BUT LOOKS VERY THIN - ALSO FRAMES ON SIP. C (MODEL) ARE .045" to .050"

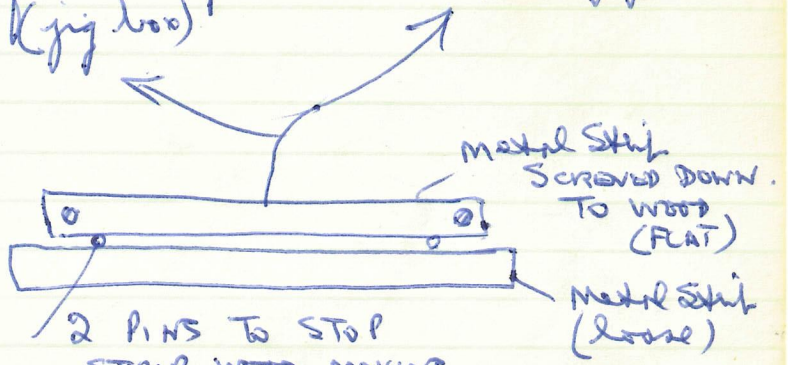
These intermediate frames are obviously thinner on PHOTO IN GWR MAG.

DECIDE ON (.031" .033" LIMITS)

DECIDE ON .045"

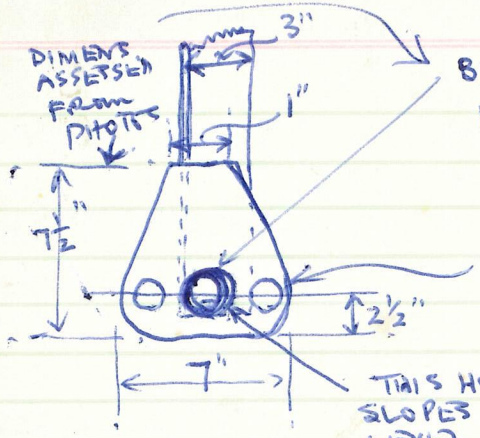
USE .025" Metal Strip for sanding edge (jig box)

USE .035" metal strip for sanding edge (jig box.)



Note! - Using metal strip rather thinner than eventual size of wood strip required means "don't sand right down to metal strip" (USE MICROMETER & WORK TO

MULTI-TUBULAR TRUSSES AS FITTED 1ST ON GWR SIPHON G. (OUTSIDE FRAMES) 1962.



BIG TRUSS ROD ABOUT 1¾" = .023" SCALE (USE .022" NS. WIRE)

LITTLE TRUSS RODS ABOUT 1¼" DIA. (.016") (USE .018" NS. WIRE)

THIS HOLE SLOPES AT ANGLE, WITH HIGHEST LEVEL AT FACE WHERE ANGLE IRON EDGE IS. (IE. ON BOTH RH. & LH. VERSIONS

METHOD

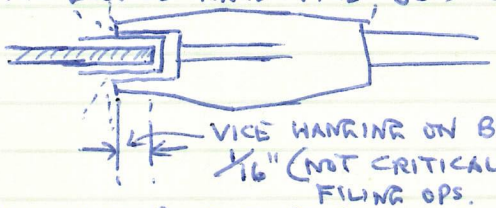
USE .008" COPPER STRIP.

① CUT .10" WIDE STRIP X APPROX 2½" LONG.

② TIN ONE SIDE (ONLY VERY THIN - WITH SOLD IRON).

③ CUT TO APPROX ½" LONG (to ⅜") & BEND ROUND PIECE OF STEEL STRIP (WITH SHARPISH EDGE) (USE HAMMER LIGHTLY TO GET FAIRLY SHARP BENDS. .035" THK STRIP STEEL

④ HOLDING WITH ECLIPSE HAND VICE, BEND BOTH ENDS AT 90°



VICE HANGING ON BY ABOUT 1/16" (NOT CRITICAL, AS FILING OPS. FOLLOW)

⑤ REMOVE FROM VICE, & USING D.B. PLIERS BEND BOTH ENDS A FURTHER 90° BUT BEFORE THIS, APPLY A SPOT OF FLUX ON FACES TO FACILITATE SOLDERING.

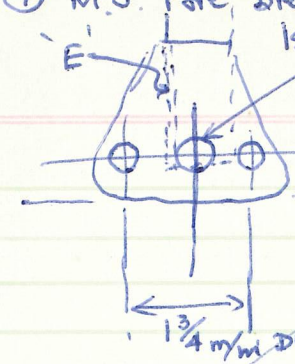
⑥ SOLDER TO BRASS ANGLE (NOTE LH. & RH VERSIONS.

ANGLE BRASS NEED NOT GOT TO BTm OF COPPER STRIP

NOTE:- HOLD ANGLE BRASS FLAT DOWN WITH STEEL RULE APPLY SOLDER AT BTm (PRE TIN THE ANGLE BRASS (THIN)

SIPHON G. OUTSIDE FRAMES

⑦ M.O. FOR DRILLING HOLES.



1ST. DRILL .022" DIA. TO JUST MISS COMFORTABLY, THE BRASS ANGLE EDGE 'E'

(POSSIBLY GET THEM NEARER NEXT TIME - SAY 1½ m/m.

Then Drill the 2 other holes .018" DIA.

⑧ File up to shape (using [redacted] FILE)

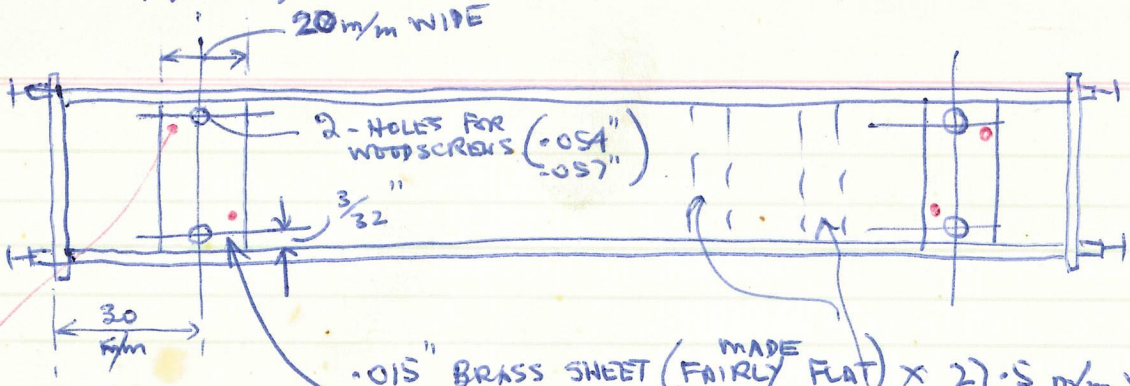
⑨ M.O. & drill other holes from other side to 'match' 1st side. - tilting drill if necessary to get parallel on 2 outer holes, and 'angle' on centre hole.

NOTE:- MAKE IN PAIRS (LH & RH.) to match on size and shape.

Note:- FOR FINAL HOLE (AT 90° to show) place both green leads on .018" wire & hold level to mark for drilling (both same height).

SIPHON 'G' (OUT. FRAME) 1962

SOLEBAR & BUFFER BEAM UNIT.
OUTSIDE FRAME
SIPHON G.



.015" BRASS SHEET (MADE FAIRLY FLAT) X 27.5 m/m WIDE

CUT A PIECE ABOUT 2" LONG TO THIS WIDTH OF 27.5 m/m SO THAT SOLEBARS WILL BE SPACED PARALLEL WHEN OTHER PIECES ARE POSITIONED

POSITIONED AS REQUIRED - ACCORDING TO V HANGERS & GAS TANKS ETC.

DOWELLING

Drill 4 holes (.021" -.022" DIA) right thro' into wood - then open out holes in beam to .028" -.030"

DOWEL PINS ARE .028" DIA N.S. WIRE.

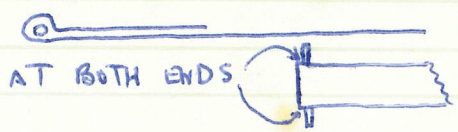
9½ AMERICAN BOGIES

DETAILS OF BOLSTER SPRINGS & EQUALIZING SPRINGS ETC

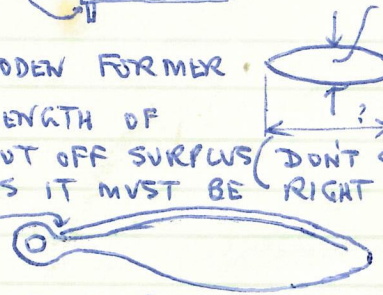
AS FITTED TO 1962 SIPHON G (INSIDE FRAMES)
THIS SHOULD BE 5 m/m (4'-3")?

① CUT ·005" COPPER STRIP to 4½ m/m WIDE X 3" LONG APP.

② WRAP ROUND ·022" NS. WIRE AT ONE END & SOLDER WELL AT BOTH ENDS



③ PUSH INTO WOODEN FORMER · ·075" & MARK OFF LENGTH OF TOP STRIP & CUT OFF SURPLUS (DON'T CUT OFF TOO SHORT AS IT MUST BE RIGHT UP TO RECESS



④ HOLDING WITH CROC CLIP, SOLDER THEM TOGETHER & TIN TOP FACE READY FOR NEXT LEAF.

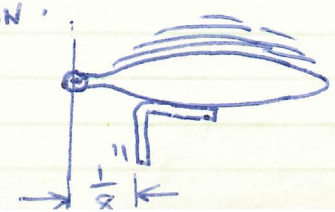
⑤ CUT NEXT LEAF TO LENGTH BY BENDING IT, & PLACING IN POS. & M.O. WITH GRAM NEEDLE

⑥ POSIT.N WITH CROC CLIP. & SOLDER IN POSIT.

⑦ REPEAT FOR 2 - MORE LEAFS (GOING SHORTER).

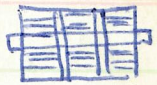
⑧ MAKE HOLDING BRACKET FROM 3/8" X ·008" HARD BRASS STRIP & BEND TO SHAPE (WIDTH IS 4½ m/m) AS ABOVE & PRE-TIN READY FOR SOLDERING

⑨ POSIT. BKT ON SPRING WITH CROC CLIP AS BELOW & SOLDER IN POSITION.



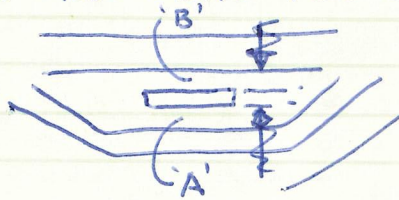
CONTINUED:-

⑩ M.O. 3 EVEN SPACES WITH GRAM NEEDLE (GUESSING) & SAWCUT (60T.), RIGHT THRO' ALL COPPER STRIPS & NEARLY BREAKING THRO' N.S. WIRE AT FRONT



⑪ NOW SOLDER THE UNIT IN POSIT ON SIDE FRAME BY FIRST POSITIONING WITH CROC CLIPS FOR CENTRE & HEIGHT.

HEIGHT 15'-



'A' IS NARROWER THAN 'B' BY ABOUT THE DIA. OF N.S. WIRE. THE

① INSERT 10 BA BRASS SCREW IN WHEELBASE & FILE DOWN HEAD TO ABOUT ·025" DEEP. THUS REMOVING THE SLOT, CLEAN UP WITH SMOOTH FILE & THEN SAW OFF TO LENGTH, LEAVING ONLY APPROX 2-THREADS

② USING ·014" DIA PHOS BRON. WIRE (LARGE REEL) WIND ROUND ·059" DRILL, DOING ABOUT 1" LENGTHS AT A TIME ← SEE BROKEN DRILL IN JIG BOX

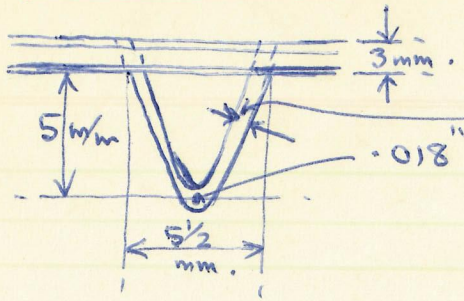
③ STRETCH THE SPRING SO YOU CAN SEE THRO IT.

④ BEND THE END TURN IN A BIT WITH TWEEZERS TO GET LEVEL & THEN SNAP OFF ABOUT 4 to 4½ TURNS & AGAIN 'LEVER' LAST TURN AT OTHER END.

⑤ ASSEMBLE TOGETHER & COMPRESS WITH HEAVY TWEEZERS & PLACE IN POSIT. IN SIDE FRAMES (SPRING HOLDS IT IN POSITION WHILST SOLD.

⑥ SOLDER BTM. AT BACK, THEN ADJUST SPRING AT TOP FOR SQUARNESS AND APPEARANCE & THEN SOLDER TOP.

MAIN V HANGER



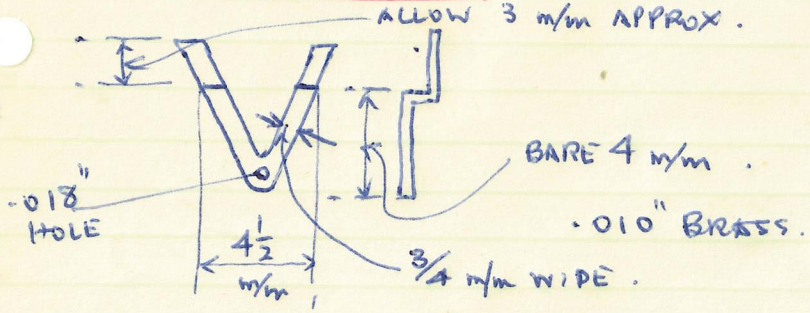
·010" BRASS?

JUST UNDER 1 m/m.

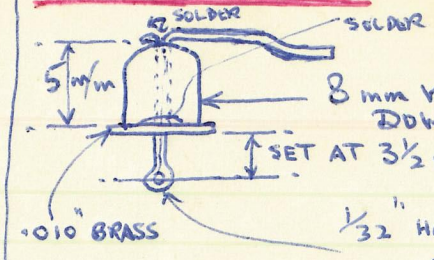
·018" HOLE

¾ m/m MAX.

SMALL 'V' HANGER



VAC CYLINDERS.



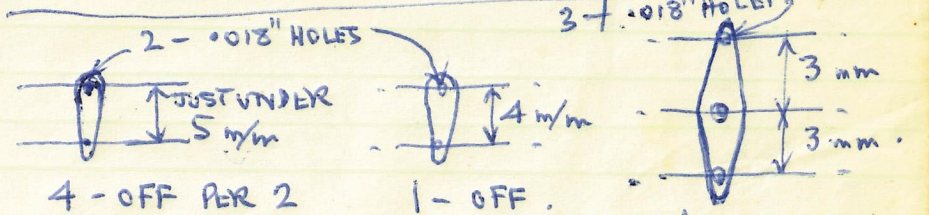
WOOD CYLINDER :-

① WITH 8 mm WOOD DOWEL IN CHUCK. SQUARE UP END THEN MARK IN PENCIL MARKS ROUND CIRCUM. AT 5 mm FROM END.

② SAW CUT ALL ROUND WITH BOT SAW APPROX ½ DEEP ONLY

③ RADIUS OTHER END WITH FILE & THEN SAND PAPER ALL OVER BEFORE SAWING RIGHT THRO.

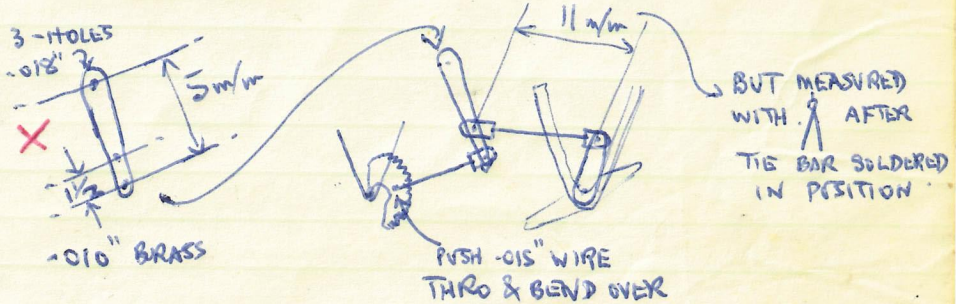
④ DRILL ·031" 1/32" hole from both ends for 1/32" HALF RD WIRE



4 - OFF PER 2 CYLINDERS ·010" BRASS.

1 - OFF. ·010" BRASS.

1 - OFF ·010" Brass



SOLDER ·015" DIA TIE BAR ACROSS SOLEBARS USING 1/32" PLY PACKING WHILST SOLDERING BUT THREAD ON OPERATING ARM X BEFORE SOLDERING.

SIPHON G.
INSIDE FRAMES
UNDERGEAR
BRAKES ETC

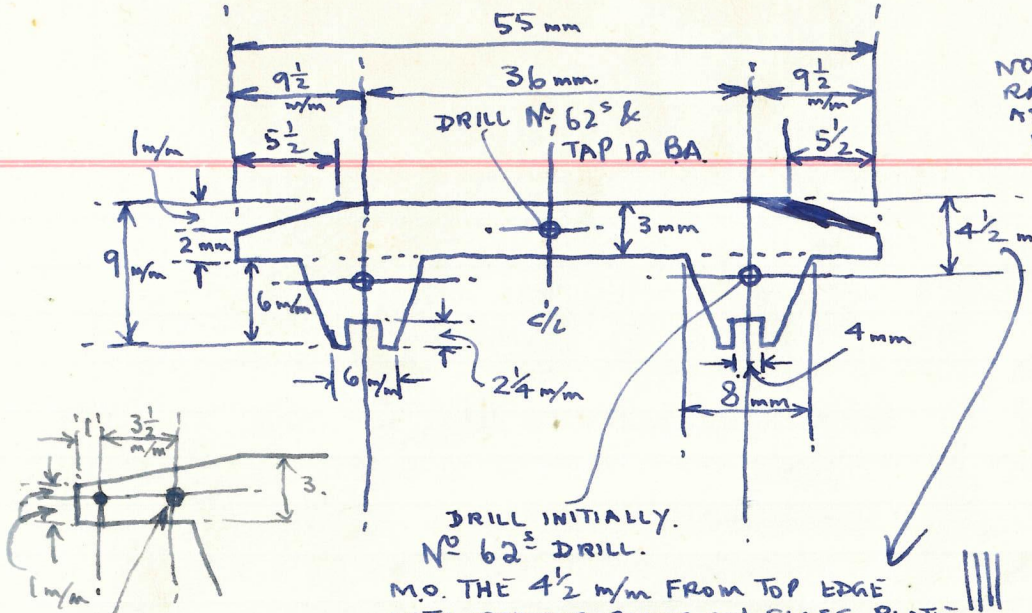
1962.

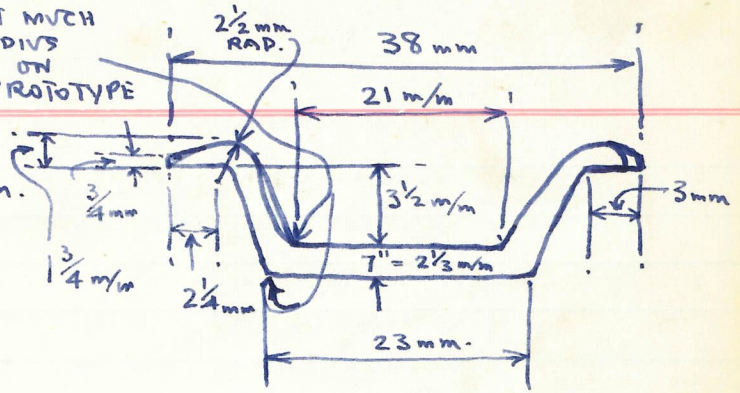
9' AMERICAN EQUALIZING BOGIES

AS MADE FOR 50' INSIDE FRAME SIPTON G. APRIL 62

BASED ON DWG IN VOL I

USED ·018" BRASS (RATHER FRAIL BUT LOOKS NICE & SLENDER & SOLDERING SEEMS EASIER – NO HEAT LOSS.





USED ·010" BRASS. CUT COMPLETELY ALL ROUND WITH TINSNIPS & CLEAN UP WITH FILE

NOTE:- M.O. WITH MASTER SAMPLE

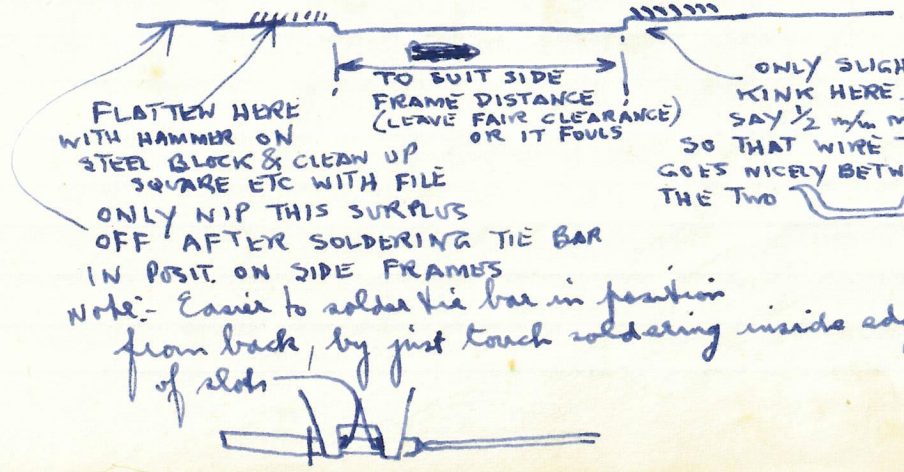
Note:- M.O. each one with thick brass sample & SAW ALL ROUND WITH FINE TOOTH PIERCING SAW. THEN CLEAN UP WITH FILE

NOTE REVERSE "SIDE" OF ONE SIDE FRAME OTHERWISE THE PAIR DONT LINE UP. (SAMPLE MASTER MUST BE SLIGHTLY 'OUT' SOMEWHERE

THESE HOLES SHOULD TAKE APPROX ·025" WIDE STRIP FOR STEP SUPPORTS BUT WIRES IS PREFERRED TRY 76ˢ ·020"

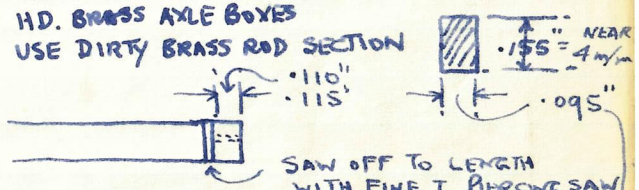
TIE BAR

USED ·022" DIA N.S. WIRE (SOFTENED IN GAS)

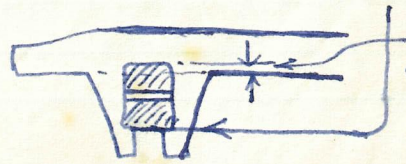


HD. BRASS AXLE BOXES

USE DIRTY BRASS ROD SECTION



NOTE:- SOLDER IN POSITION WITH BTM. EDGE IN LINE WITH TOP OF SLOTS IN SIDE FRAME



STEPS. USE:-

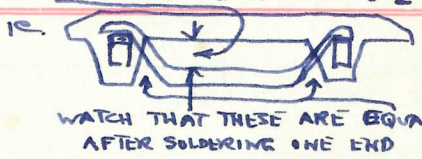
9 F.T. AMERICAN EQUALISING BOGIES — CONTINUED. —

ASSEMBLY

① SOLDER AXLE BOXES 1ST.

② SOLDER OUTSIDE STRAP (AXLE BOXES DONT NEED CLAMPING IF CARE IS USED)

③ GAP SHOULD BE APPROX 3½ mm.



WATCH THAT THESE ARE EQUAL AFTER SOLDERING ONE END

④ TRY INSIDE STRAP FOR PARELLILITY WITH OUTSIDE (& FILE APPROX AS REQUIRED TO LINE UP

⑤ WITH CROCCLIP JUST ON THE AXLE BOX SOLDER ONE END OF INSIDE STRAP & EXAMINE. IF OK REPEAT OTHER END.

⑥ AFFIXING TIE BAR SEE NOTES UNDER TIE BAR

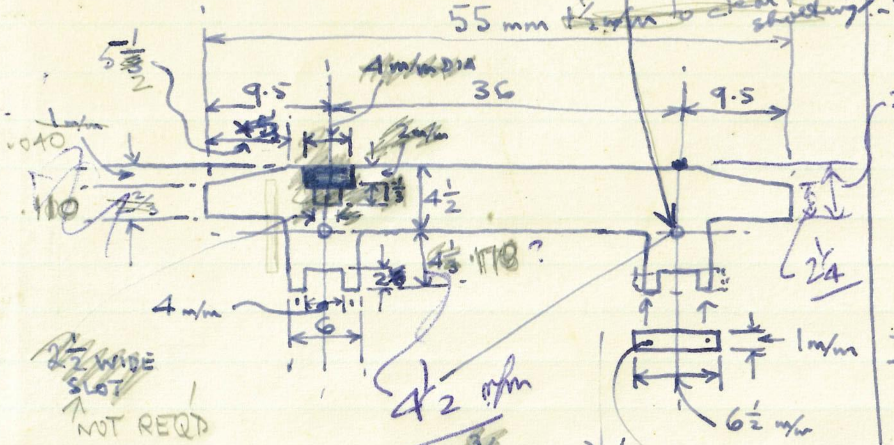
9'-0" VOLUTE BOGIE

QK. FOR APPEARANCE BUT A BIT SOFT WHEN CUT OUT $\frac{3}{4}$ 2

USE ·022" HARD BRASS STRIP. (APPROX $1\frac{1}{2}$ to $1\frac{3}{4}$ WIDTHS - LONG LENGTHS)
OR N.S.

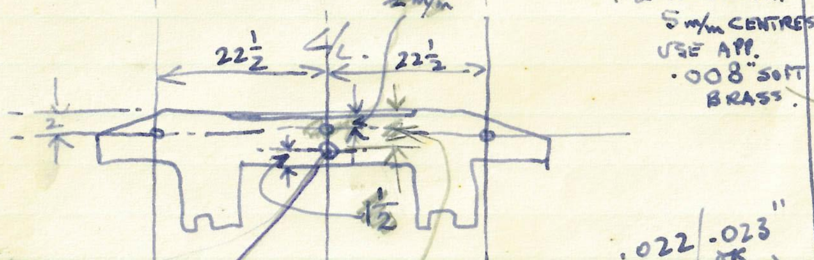
FILE 'NICKS' AT BACK TO LINE UP [cup-shaped symbol] WHEN SOLDERING IN POSITION

2 PILOT HOLES ·052" DIA.



2 RIVETS AT 5 m/m CENTRES USE APP. ·008" SOFT BRASS.

BOILER BANDS FROM HAMBLINGS OK



3 HOLES DRILLING FOR STEP SUPPORTS (TO SUIT SMALL STAPLES)

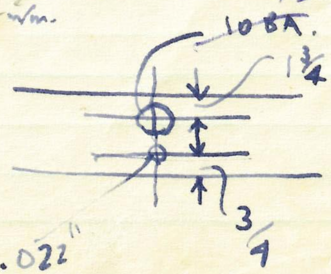
·022/·023" OK.

~~TAP 12 BA~~ AT ~~2 m/m~~ $1\frac{3}{4}$ m/m FROM TOP

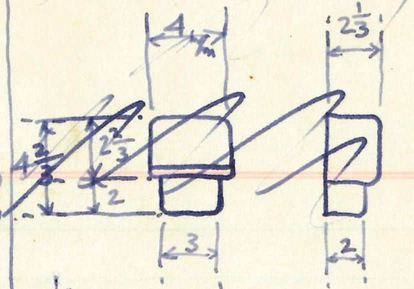
No 10 / No 58 ·032

Drill No 62 & Tap 12 BA

12 BA for ·018" Brass



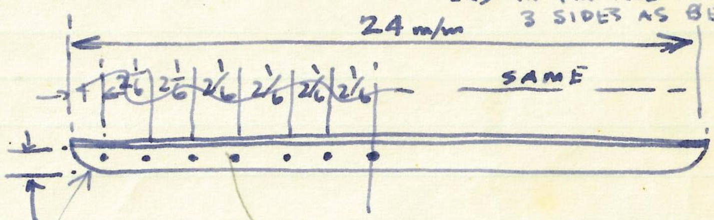
AXLE BOXES (USE ·156" X ·120")



1. SAWCUT ON 3 SIDES WITH FRET SAW.
2. (2) FILE DOWN 3 SIDES APP. $\frac{1}{2}$ m/m. & RADIUS TOP EDGES ALL ROUND.
3. (3) SAWCUT ON 3 SIDES AGAIN LEAVING $\frac{1}{2}$ m/m LIP.
4. (4) SAW OFF TO LENGTH LEAVING $1\frac{3}{4}$ $1\frac{1}{2}$ m/m

(5) GRIPPING OTHER END IN PIN VICE FILE DOWN 3 SIDES AS BEFORE

IMPORTANT



1 m/m ANGLE

MAT. APPROX ·007/8" THK (SUITABLE FOR SOLDERING.

USE EKGS ANGLE BRASS.

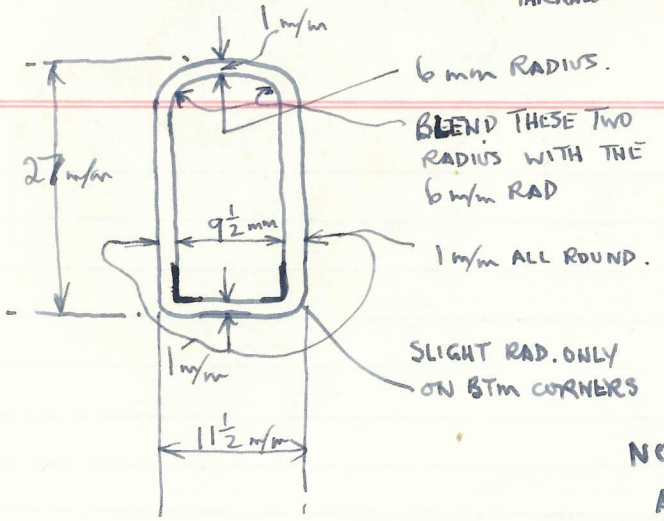
NOTE ·048/·050 DOLLY WITH SHARP PUNCH IS ONLY ONE SUITABLE FOR RIVETS

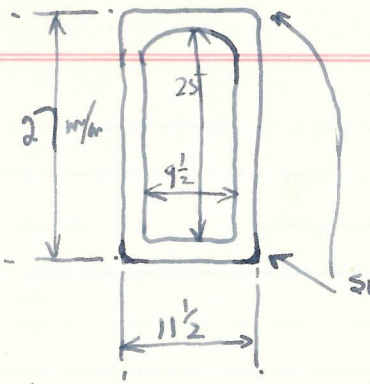
USE 5/32" BRASS ROD

1. FILE FLAT AT END OF ROD (to ·075 ·080) FOR DISTANCE OF APPROX 1" to $1\frac{1}{4}$"
2. (2) SAW OFF TO LENGTH. ~~2 m/m~~ $1\frac{1}{2}$ LONG
3. (3) CLEAN UP WITH FILE TO LIE FLAT ON SIDE FRAME

CORRIDOR CONNECTIONS (NEW DESIGN) AS FITTED TO SIPHON G INS. FRAMES 1962

1 m/m PLY (EDGES SANDED WELL TO REDUCE ~~WIDTH~~ THICKNESS IMPRESSION

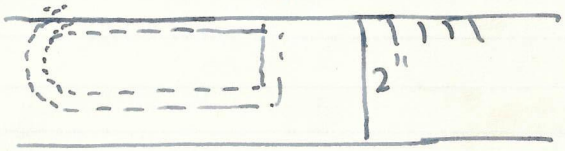


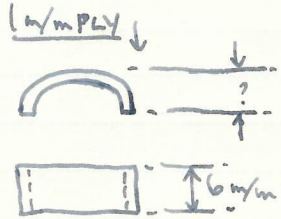


THIS IS SIM. TO OPPOSITE ONE EXCEPT FOR FLAT TOP

1 m/m PLY.

NOTE!- AFTER MARKING OUT COMPLETE — SAW OUT CENTRE APERTURE 1ST — then trim with file before cutting "outside" shape with EXACTO. (USE RULE THUS TO PROTECT THE COMPONENT. 'EDGE'





OPS ① CUT A PIECE OFF 1 m/m PLY APPROX 3" LONG x 6 m/m WIDE (WATCH GRAIN TO FACILITATE BENDING)

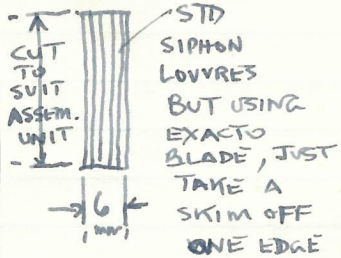
② STEAM CENTRE OF STRIP WHERE BEND IS SITUATED TO GET IT TO BEND ROUND WOODEN BENDING JIG

③ SECURE WITH WOODEN CLOTHES PEG & HOLD IN STEAM JET UNTIL WELL STEAMED COOL OFF

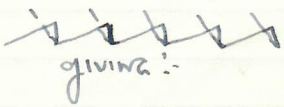
④ CUT OFF SURPLUS STRIP WOOD (TINSNIPS) AT POS. WHERE VERTICALS START & FILE CLEAN

⑤ USING HEAVY TWEEZERS, JUST BEND IN ENDS TO SUIT FRAME ABOVE AS THEY HAVE TENDENCY TO STRAIGHTEN OUT

CORRUGATED SIDE:

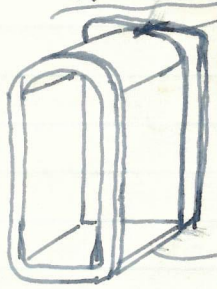


giving:-



ONLY A SKIM — NO FUSS NEEDED.

ASSEMBLY

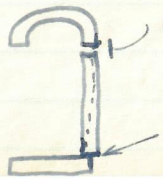


NEARLY LEVEL WITH TOP.

GLUE THIS SKELETON TOGETHER & ALLOW 2 HRS TO SET UNDER SMALL WEIGHT BEFORE FITTING SIDE CORRUGATIONS.

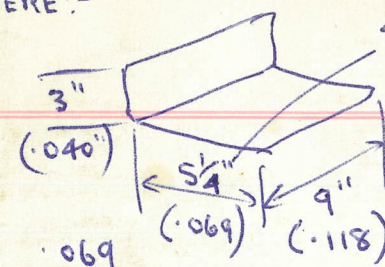
1 m/m PLY BASE 6 m/m WIDE x SAY 11 m/m LONG.

NOTE:- LOOKS OK. IF SIDE CORRUGATIONS ARE STUCK IN FLUSH TOP (~~CUT A~~ ~~EDGE~~ & SLIGHTLY PROUD AT BTm THUS



NOTE:- PAINT BLACK BEFORE GLUEING TO BODY

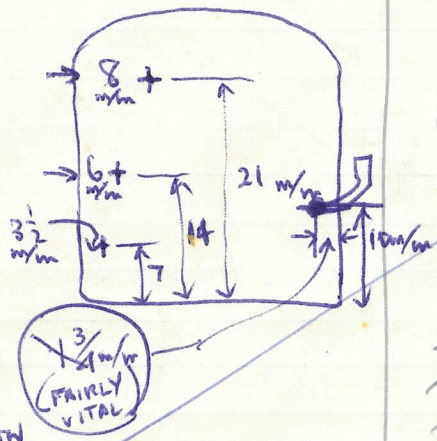
STEPS ON SIP. G W1364 WERE:-



·069
·040
·109

POSITIONED:-

Fitted this style & in this position on my 2-Siphon G's (1962)

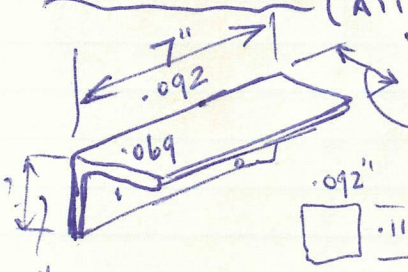


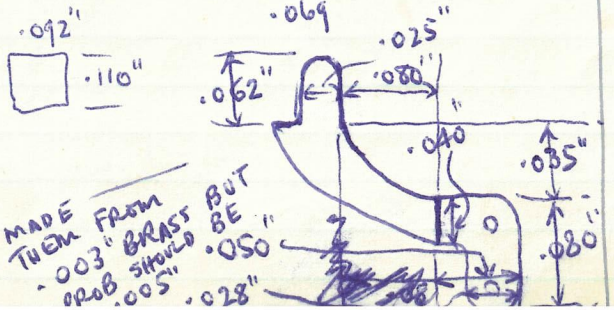
RIVETS IN PUNCH:- (HODGE)

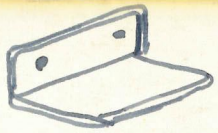
① DRILL No 80 HOLE TO DEPTH OF APPROX 1/64"

② LIGHTLY OPEN OUT WITH 68 DRILL

BOTTOM STEPS (ATTACHED) TO BUFFER BEAM) W1245





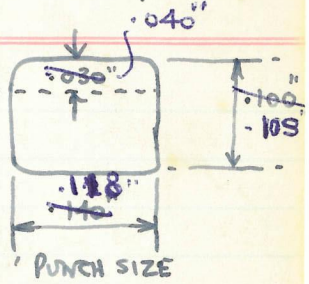


END STEPS FIRST TRIED ON SIPHON G INSIDE FRAMES 1962.

·005" COPPER STRIP.

① PUNCH OUT IN LEAD SHEET & REMOVE

② PLACE ON SHARP EDGE OF STEEL BLOCK AT HERE & WHILST HOLDING DOWN WITH 6" RULE, BEND DOWN WITH TWEEZER END & RUB FLAT.



③ EXAMINE FOR PARALLELITY & CONSISTENT SIZE.

④ PLACE STEP ON EDGE OF PLY WOOD BLOCK & PRICK IN BY SIGHT, 2- RIVETS ← DONE IN PUNCH NOW.

PUNCH REDUCED (SEE ABOVE)

Note:- They look slightly WIDE when in position at coach end — next lot consider checking punch for ·140" DIM. & reduce if considered necessary.

⑤ Place ½ leg in slot in balsa & using 3" Approx length of Hard Brass Strip previously Cut to approx ·030" width, solder tag dead in centre & snip off. Clean up with file all round

Note:- NO Need to tin step before soldering tag, & don't put too much solder on as it thickens the step.

⑥ FIT ALL STEPS IN COACH, USING. 76 DRILL & SLOTTING WITH EXACTO. THEN REMOVE TO CHUNK OF BALSA WOOD (CAREFULLY MARKED) WHICH 'END' OF COACH ETC & PAINT BLACK (DULL)

DOOR HANDLES 40' SIPTON F. 1961/2

NOTE:- USING .010" WIRE (ENTOM. PINS) FOR 3/4" DIA HANDLES LOOKS TOO THIN & FLIMSY.

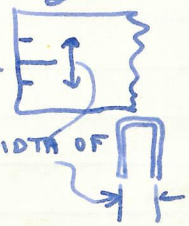
USED 30' SWG. PIANO WIRE (INST. STORES) (.0124") - LOOKS VERY GOOD.

① BEND  ROUND DUCK BILL PLIERS. THEN JUST INSERT IN ECLIPSE HAND VICE  AND BEND 2-LUGS DOWN

KEEP TO A MINIMUM

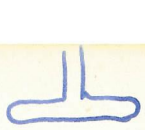
NIP OFF SURPLUS TO APPROX 1/8" LONG

TO INSERT IN BODY USE CARD TEMPLATE & PLACE ON VEHICLE & PRICK IN CENTRES FOR DRILLING WITH NEEDLE



DRILL 80° Holes about 5/32" Deep. & press the handle in using Duck Bill Pliers.

Note:-  - Plates can be added if desired as per prototype.



DOOR HANDLE 40' SIPTON

USE .015" BRASS WIRE EMERY'D CLEAN. & USE USUAL JIG FOR SOLDERING (USE MIN. OF SOLDER):-

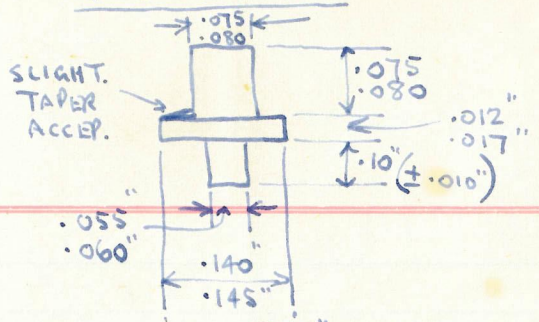
SNIP OFF HANDLES SLIGHTLY OVERSIZE

THEN GRIPPING IN PLIERS  FILE DOWN EACH SIDE WITH SMOOTH FILE  TO ABOUT 1·25 m/m (.050" APP.).

Note: Prototype Handle measured 4¼" (.055")

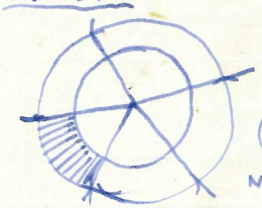
Fitting to vehicle Drill No 77½ (.018") hole in body, which is easy fit for .015" brass handle & eliminates breaking off soldered handle. then pick up handle in tweezers  & steer onto EVO-STICK. & insert immediately into 77½ hole & position carefully for horizontal position & distance out from body.

GAS LAMPS



TURN FROM 5/32" DIA. BRASS ROD.

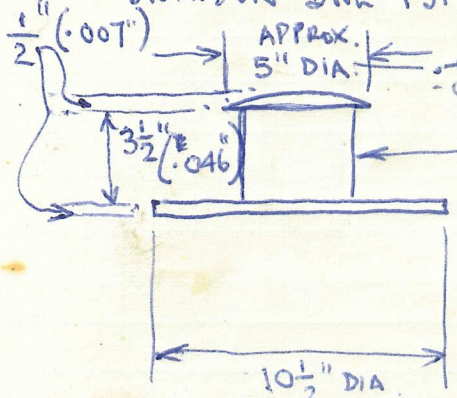
BUCKETS



DRAW .7" RAD & .53" RAD. & M.O. ON LARGEST DIA (.7) A LENGTH OF .56" IF OVERLAP (USING SAY PAPER) OR .54 IF NO OVERLAP (SAY USING COPPER STRIP.

HANDLES MADE FROM .010" APPROX COPPER WIRE.

MEASURED FROM SWINDON DWG 131813 (COACH PAINTING DETAILS)



PAINTED White

LOUVRES XMAS 1961 (USED ON 4.W. SIP. C.) GOOD.

(1) FILL IN GRAIN OF 1 m/m PLY WITH PLASTICINE (RUB OR STROKE IN)

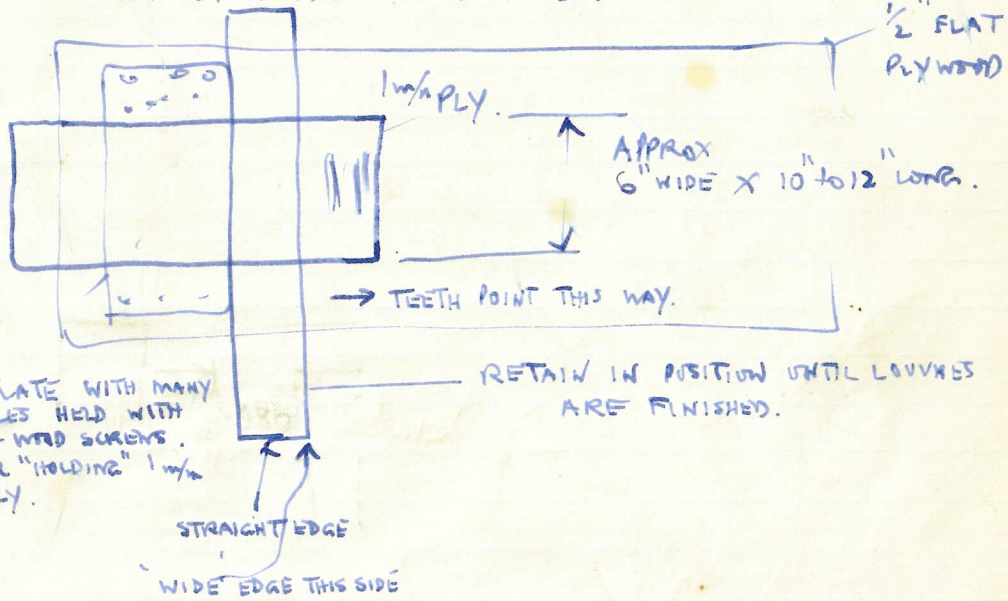
(2) SCRAPE OFF SURPLUS PLAST. IF ANY WITH 6" RULE.

(3) SAND WITH 7/0 SAND PAPER.

(4) GO OVER AGAIN WITH 'WETANDRY' (USED DRY). COMES UP LIKE GLASS. — W/O REF. BY HODGES.

(5) SET FRET SAW BLADE IN VICE WITH MAX. TEETH SHOWING. (AFTER BREAKING OFF 19T OF 32T/INCH BLADE (SELECT 'EVEN' TEETH). ALSO SET BLADE APPROX IN CENTRE OF VICE

(6) ~~RUB~~ USE FOLLOWING SET UP FOR RUBBING LOUVRES.



(7) KEEP RUBBING TILL GROOVES GET WIDE ENOUGH. — THEN RUB ALL OVER WITH WET & DRY. THEN REMOVE DUST FROM GROOVES WITH GRAM NEEDLE

(8) LOOK FOR ODD 'BITS' & REMOVE WITH SANDPAPER OR TWEEZERS.

(9) MARK CLEARLY which way blade was used ↑ OR ↓

TURNING:-

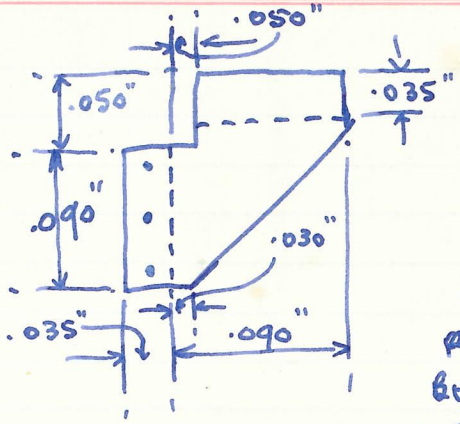
(FOR LARGE HANDLE APPROX 10 MINS PAST.

SET. LITTLE HANDLE AT 1/4 PAST. & THEN ADV. CUTTER & TURN DIAM. (GAUGE IS IN BOX OF ☐) (NOTE THIS 1/4 PAST SETT. REMOVES 1/2 OF FLANGE GOING IN) THEN ON OK. DIAM, TURN LITTLE HANDLE TO JUST PAST 1/4 TO, & GO TO & FRO TO CLEAN UP

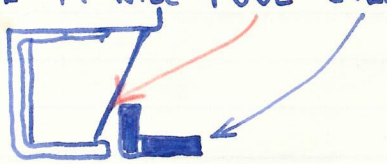
2ND OP. AFTER CHUCKING, PART OF SURPLUS METAL ON END (LITTLE HANDLE AT 1/4 PAST (HELD WITH CELLOTAPE) THIS GIVES ABOUT SAME WIDTH AS PROTRUDING BURR FROM 1ST OP. THEN FORM RADIUS WITH SMOOTH WEDGE FILE & EMERY & REMOVE BLUISHED

SOLEBAR GUSSETTS 1ST USED ON 28'-6" SIPHON C

PUNCHED FROM .005 ALUM. STRIP.

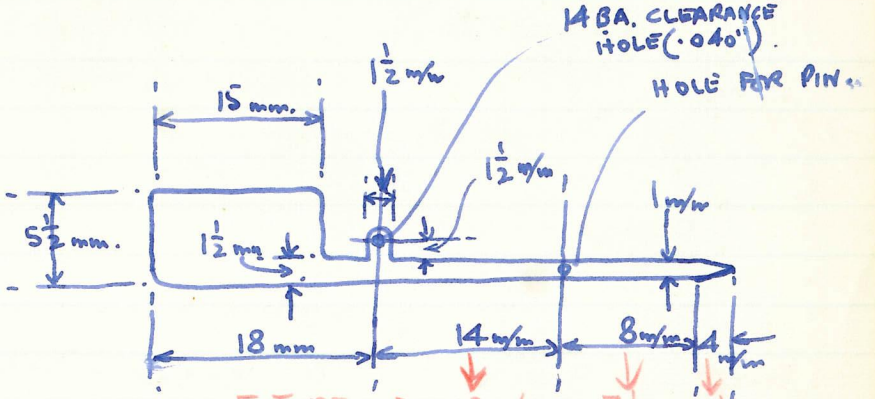


3 PUT RIVETS IN (NOTE L.H. & R.H. REQ'D) WITH GRAM NEEDLE WHILST ON LEAD SHEET. PLACE CORNER OF 12" RULE OVER - - - - - & BEND UP AT 90° (ONE LUG AT ONCE). STICK IN POSITION ON SOLEBARS WITH EVO STICK. NOTE!- MAKE SURE THAT IT DOESN'T STICK OUT TOO FAR OTHERWISE IT WILL FOUL STEP!-

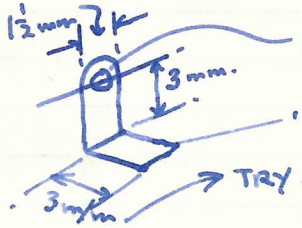


COUPLINGS ON VEHICLES WITH EITHER SIDE BRAKE GEAR (1ST USED ON 1962 SIPHON 'C')

MAT. .015" BRASS SHEET.



KINK THUS



14 BA TAPED HOLE.

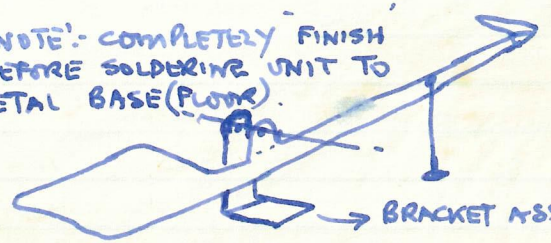
.015" BRASS.

TRY 4 m/m IN FUTURE (PROB. EASIER TO GET SOLDERING IRON TO ON ASSEMBLY).

NOTE!- AFTER ASS. CUT 14 BA SCREW TO LENGTH & LIGHTLY TAP WITH HAMMER (APPLY LIPSTICK TO STOP MOVEMENT AFTER SETTING FOR FREE MOVEMENT (NOT SOLDER - MIGHT STICK THE LOT).

ASS.

NOTE!- COMPLETELY FINISH BEFORE SOLDERING UNIT TO METAL BASE (FLOOR).



W IRONS & SPRING SUSPENSION ON SIPHON 'C' 1962

4'-6" SPRINGS. (USE STD. TINNED COP. STRIP.) — ·006"?

① CUT COPPER STRIP TO 120 m/m LONG & FOLD 6 TIMES, STARTING WITH TOP LENGTH AT APPROX 25 m/m & GOING SMALLER.

(2) USING ·010" TIN. COP. STRIP. (CUT SLIGHTLY NARROWER TO APPROX ·040"/·045" WIDE) MAKE A CLAMP THUS ⊏ BY BENDING & THEN HAMMERING ROUND A 6" RULE. TRIM ONE LEG OF THIS CLAMP TO JUST ABOUT THE WIDTH OF SPRING LEAFS THUS

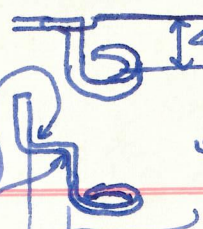
THEN CUT REMAINING LEG TO LENGTH & BEND UP. THUS →

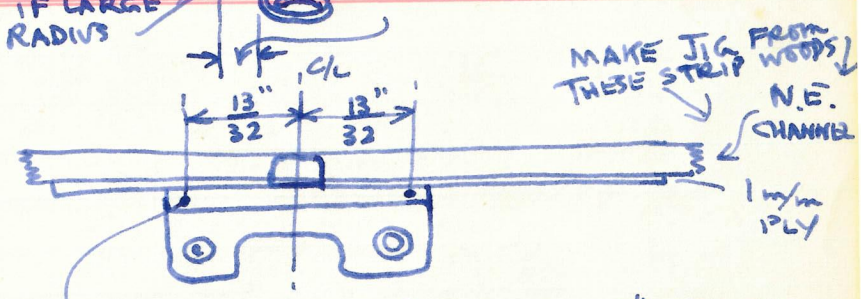
SOLDER JUST EITHER SIDE OF CLAMP ONLY. (cleaning edge of cotton strip helps here)

③ CUT TOP LEAF TO 21 m/m LONG FROM 3 PENCIL MARKS ON A PIECE OF PLYWOOD

& THEN FINISH OFF SPRING WITH HANGERS USUAL WAY.

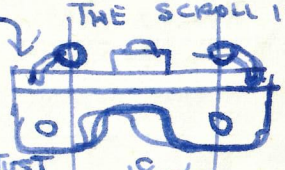
SCROLL IRONS





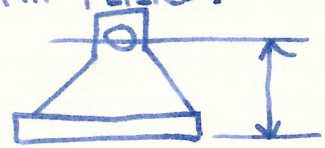
DRILL 2-HOLES ·0275" DIA FOR ·028" N.S. WIRE

NOTE:- WHEN SCROLL IRONS ARE SOLDERED IN POSITION AS BELOW:-



THE SCROLL IRONS SHOULD BE 18 m/m CENTRES APART

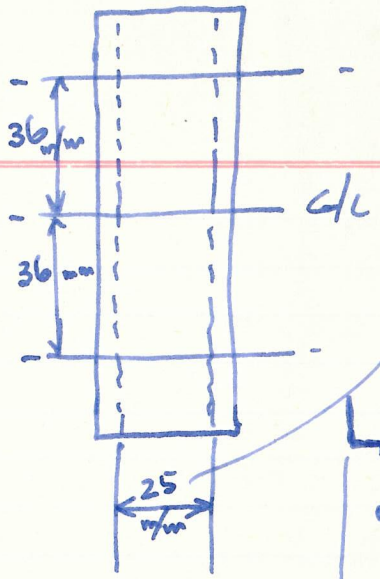
NOTE:- SOME ADJUSTMENT IS POSS. AFTER SOLDERING BY BENDING WITH PLIERS.



SET SCRIBER TO HEIGHT OF M.O. & 9 m/m DEAD & CENTRE POP WITH GRAM NEEDLE. DRILL WITH SPECIAL CROOKED DRILL FOR PEZO BRASS CUPS. (SET DRILL IN PIN CHUCK FOR DEPTH (SAFE) (APPROX 3 m/m).

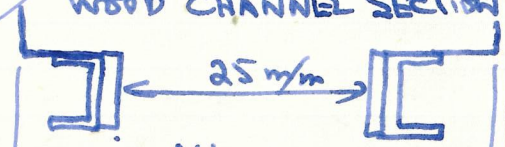
BUT USE SMALLER PILOT DRILL FIRST.

UNDERFRAME DETAILS ON SIPHON C 1962 (SEE OTHER SHEET FOR EITHER SIDE BRAKES)

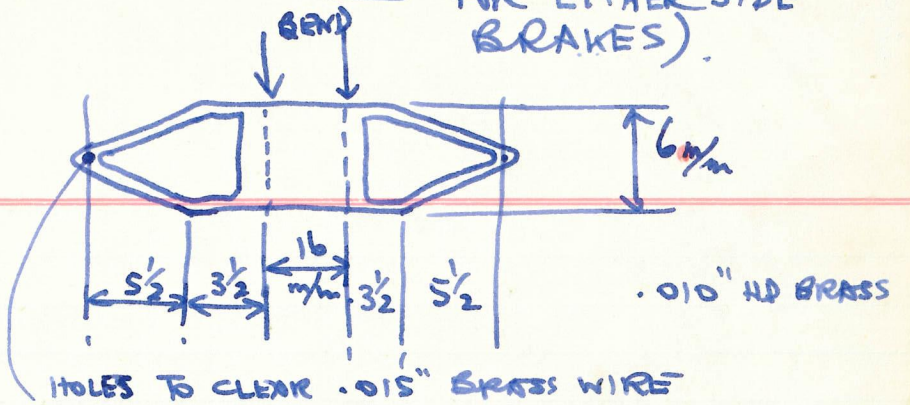


PENCIL LINES 25 mm APART JUST GIVES NICE CLEARANCE FOR AXLE SHAFT WITHOUT FILING LATTER.

I.E. ~~SET~~ SOLEBARS TO GLUE THESE LINES (I.E. SOLEBARS USING 1 m/m PLY BACKING TO N.E WOOD CHANNEL SECTION.

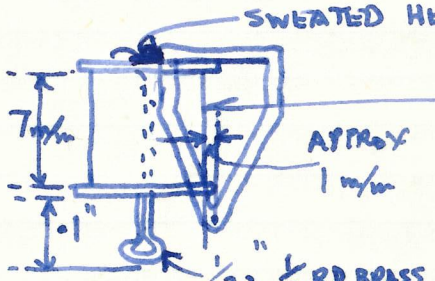


ALL THIS SEEMS IDEAL FOR 8'-6" WIDE VEHICLE.

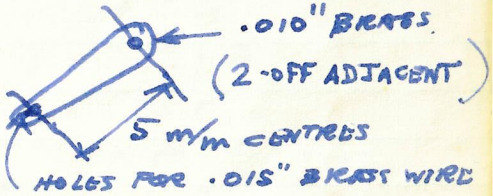


.010" HD BRASS

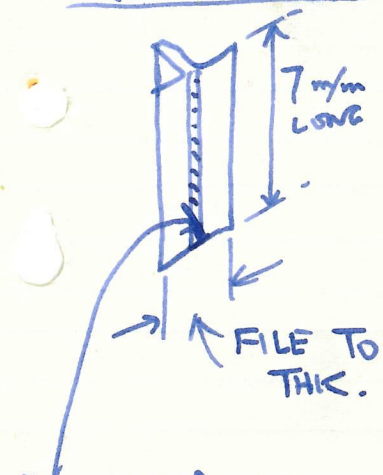
HOLES TO CLEAR .015" BRASS WIRE



WOOD DOWEL .305" DIA (APP. 7½ m/m DIA)



QUEEN POSTS.



MAKE FROM .005" COPP. STRIP. & BEND IN APPROX 1" LENGTHS & SAW OFF TO 7 m/m LENGTHS.