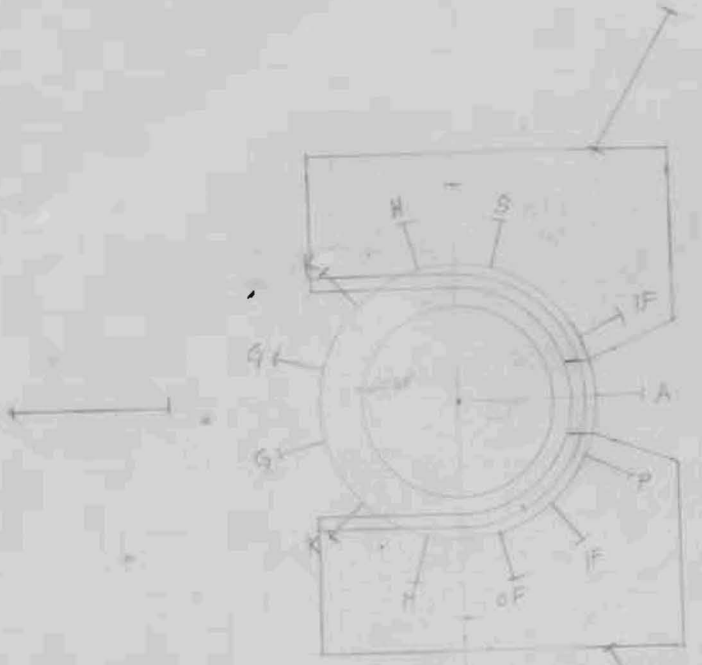
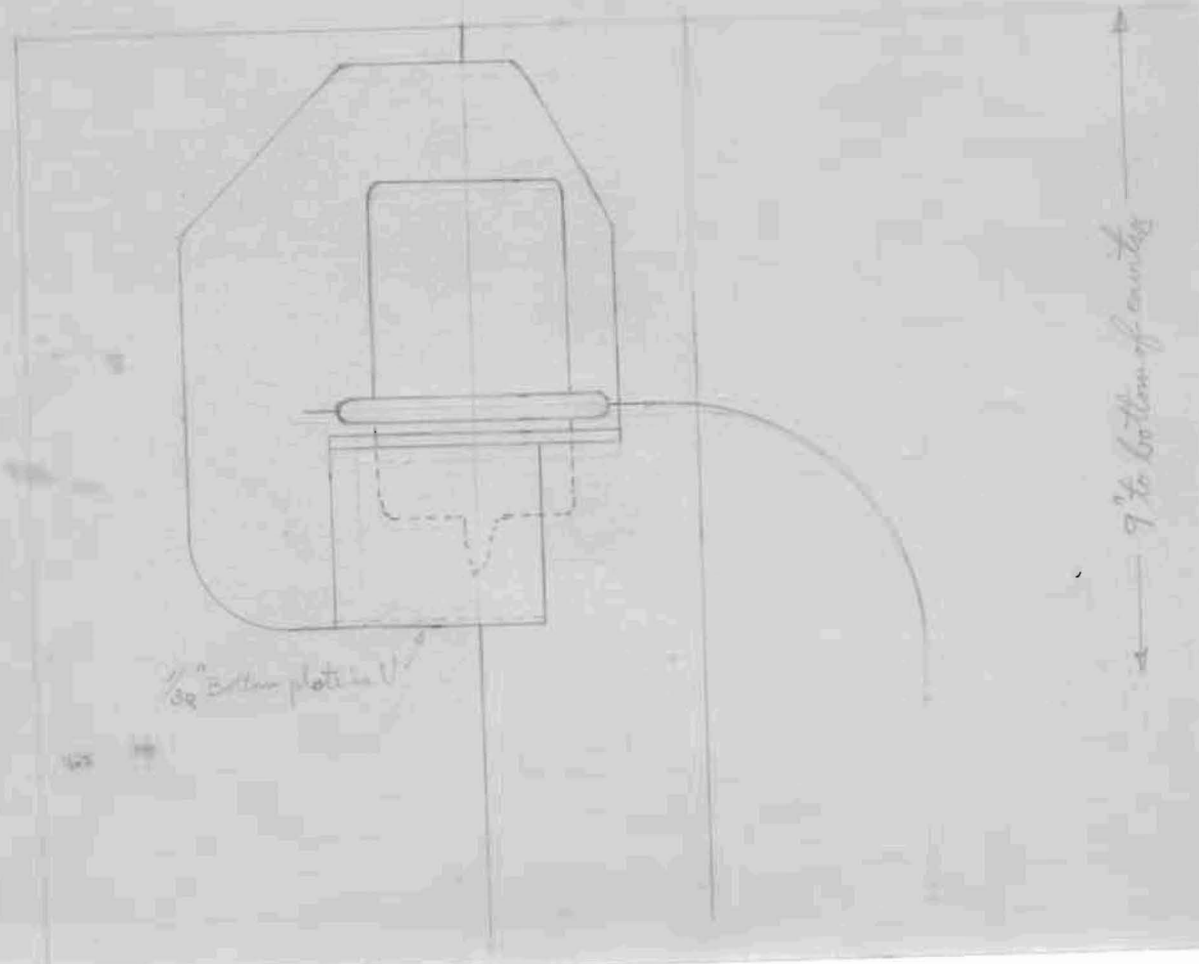
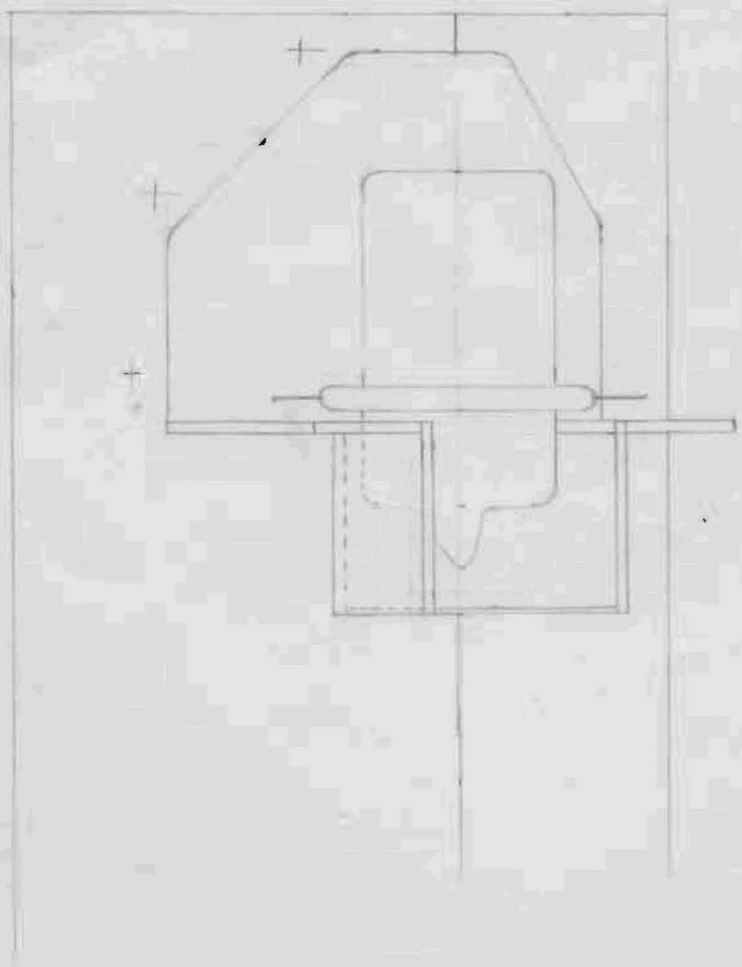
5-11-42



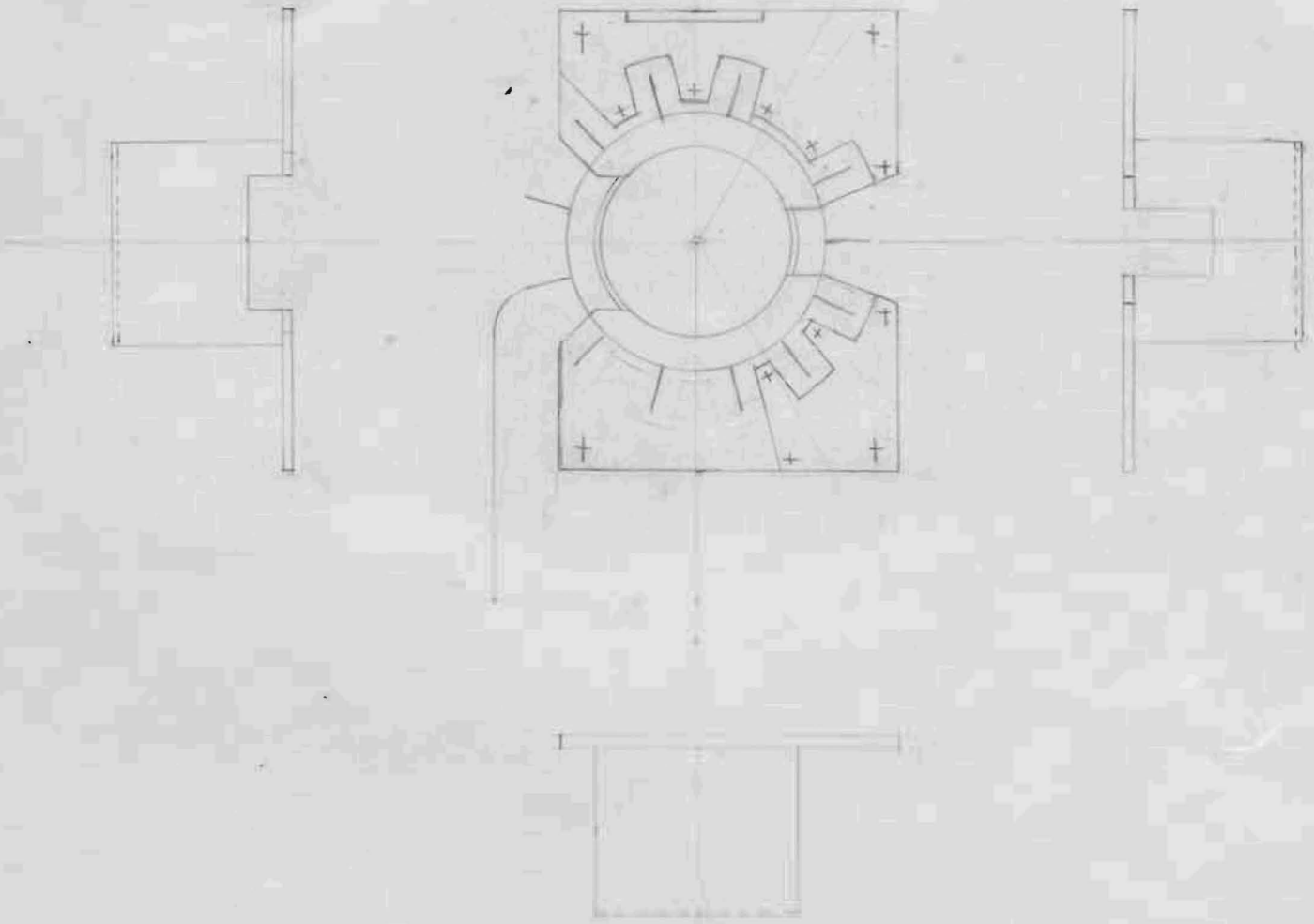


5-12-42

socket assembly on partition



Sorbit 5-13-42

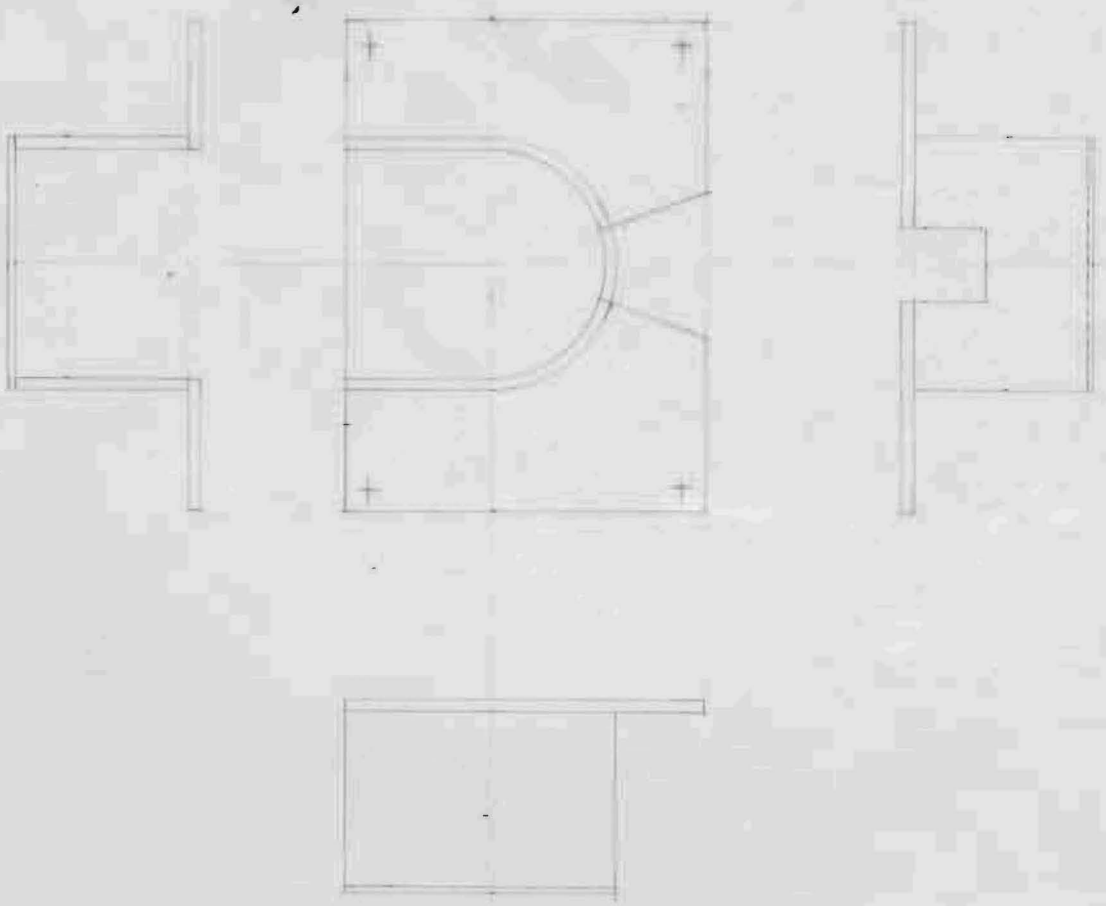


5-19-42

Tube shield

5-14-42

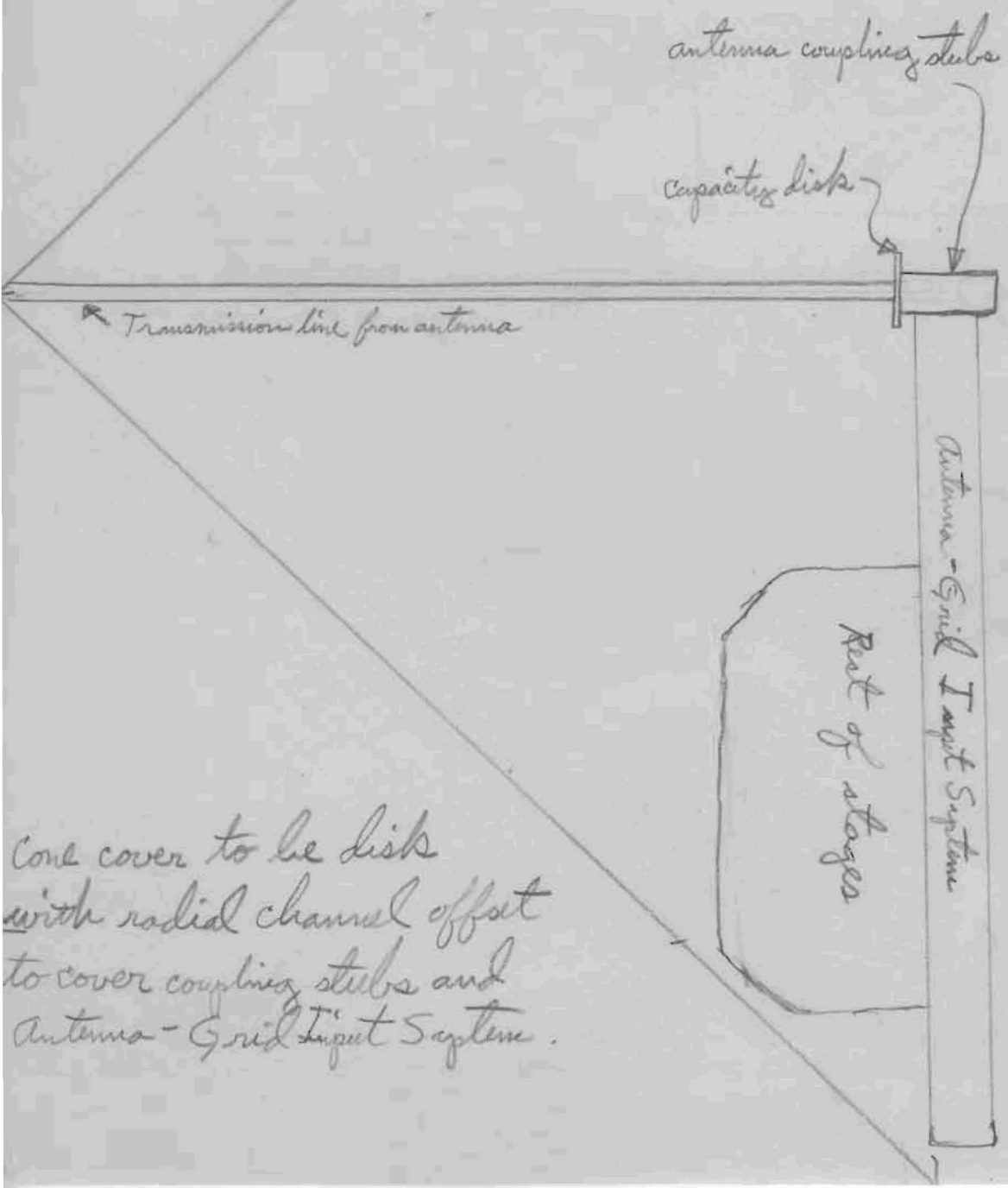
Sculpt base



Reverse the antenna coupling stub lines

Replace the capacity cylinder with a capacity disk

Make coupling stubs and transmission line coaxial and connect end on.



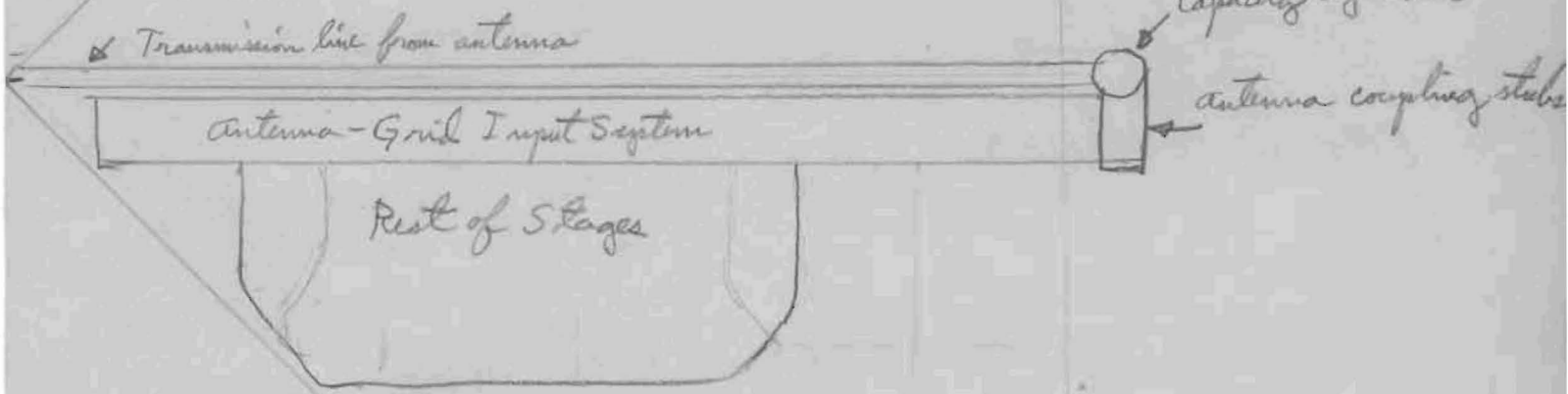
This design will allow each section of grid line to be increased from 10" to 11" which allows larger conductors and less loss in grid lines

Cone cover to be disk with radial channel offset to cover coupling stubs and Antenna - Grid Input System.

1-10-43

Location of Amplifier inside of cone

This design allows amplifier to be placed practically entirely within cone.



Cone cover to be a disk with only small cylindrical offset at center to cover capacity cylinder and coupling stubs.

See over for an alternate design

AIEE July 1934 page 1047

$$R = 41.6\sqrt{f}\left(\frac{1}{a}+\frac{1}{b}\right)\cdot 10^{-9} \text{ ohms/cm.}$$

a = inner radius of outer conductor in cm.
b = outer radius of inner conductor in cm.
f = freq in cycle/sec

Handbook of chemistry and physics.

$$C = \frac{.2416}{\log_{10}\frac{a}{b}}\cdot 10^{-12} \text{ farads/cm.}$$

Since effective circuit capacity across end of line is one half the total line capacity the effective line capacity is one half the above value or

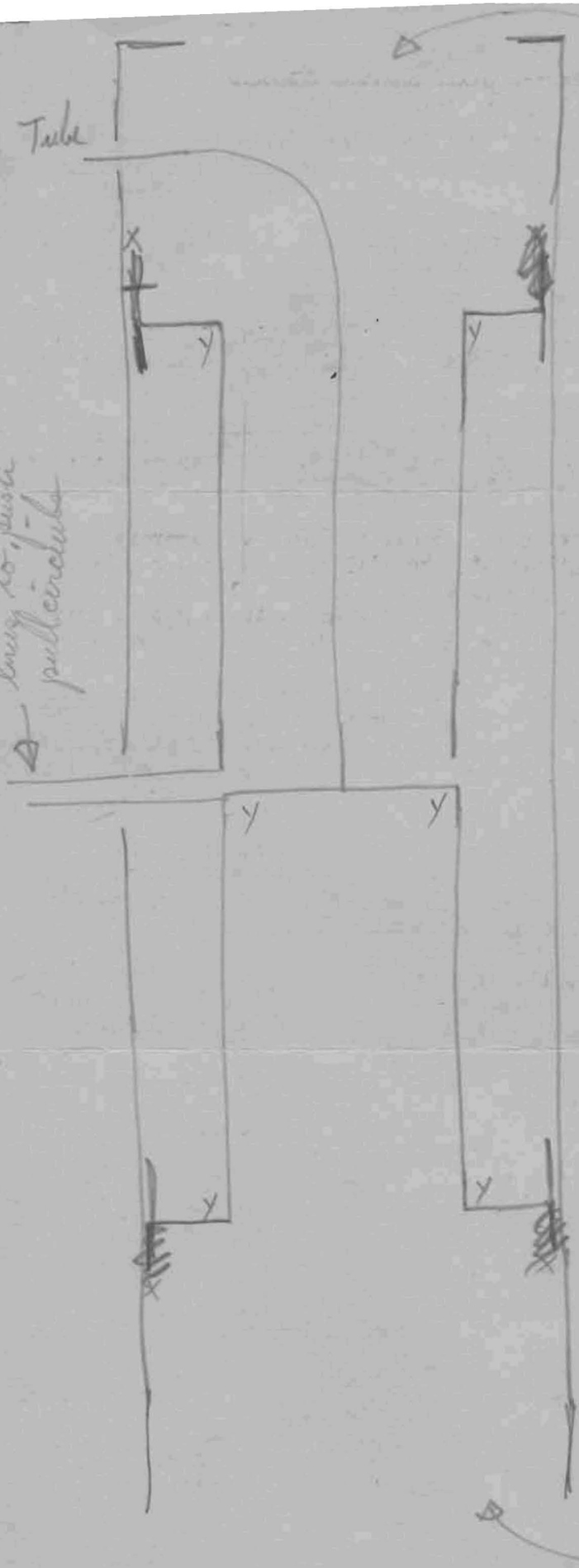
$$C = \frac{.1208}{\log_{10}\frac{a}{b}}\cdot 10^{-12} \text{ farads/cm.}$$

$$RC = 5.03\cdot 10^{-21}\sqrt{f}\left(\frac{1}{a}-\frac{1}{b}\right)\frac{1}{\log a - \log b}$$

a is the variable.

$$RC = 5.03\cdot 10^{-21}\sqrt{f}\,\frac{1}{a(\log a - \log b)} - \frac{5.03\cdot 10^{-21}\sqrt{f}}{b(\log a - \log b)}$$

11-15



series stub tees may be inserted and removed thru open bottom. Soft soldered in a ring to wall at X thru top hand hole and bottom open.

This construction allows coupling stubs to be easily changed without disrupting entire assembly. Obviously the stubs themselves will have to be hard soldered at Y and all other sub assembly points

bottom end no cover plate