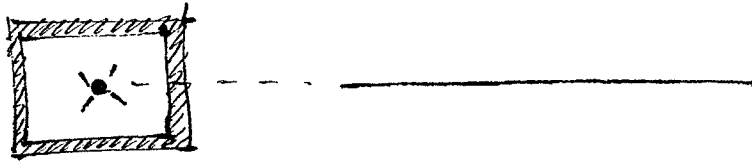
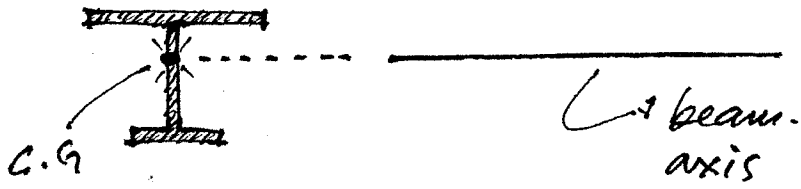
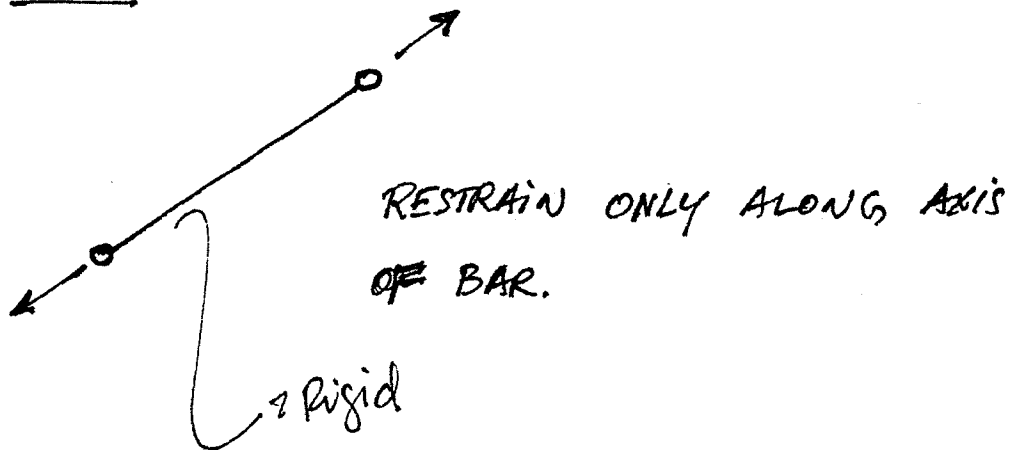


LINE MEMBER (BEAM/COLUMN)

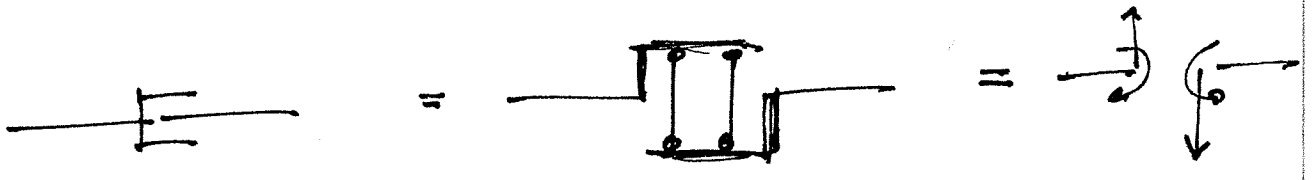
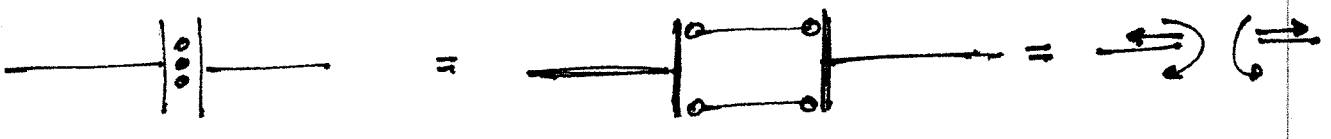
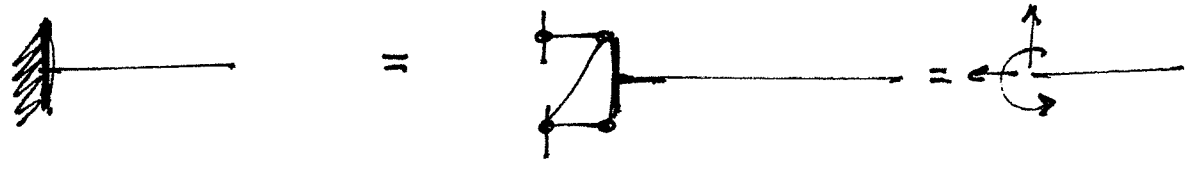
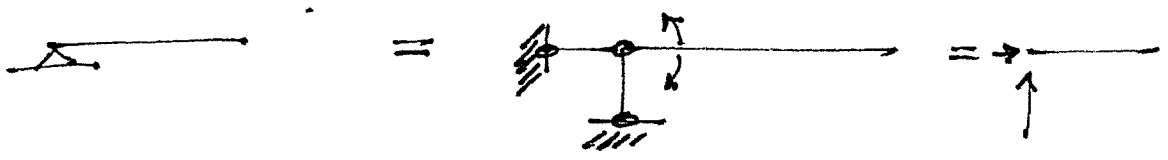
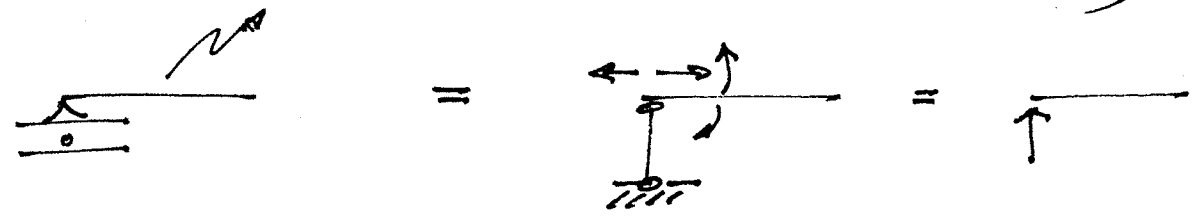


BAR.



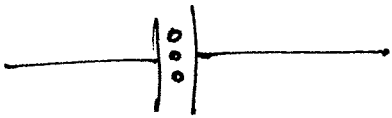
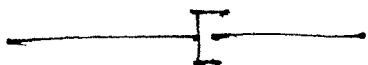
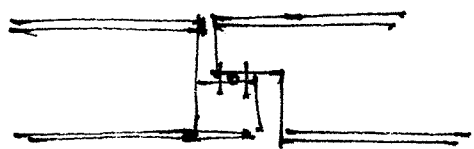
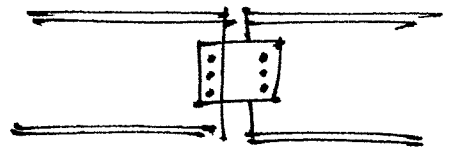
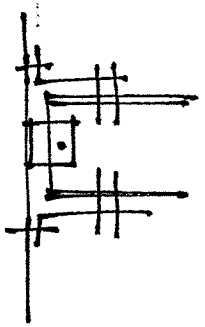
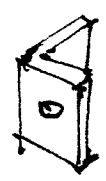
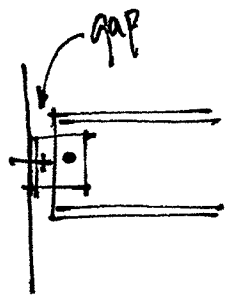
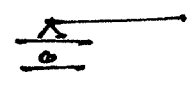
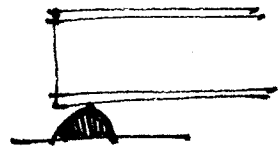
IDEALIZED STRUCTURAL MODELS

axis of member, (G.G. of cross section)



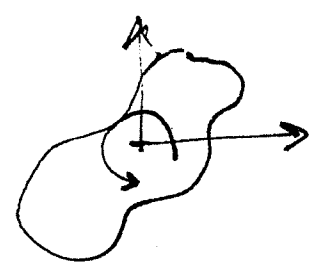
AMEND

EXAMPLES



REVIEW DETERMINANCY VS. INDETERMINANCY

- RIGID BODY IN-PLANE

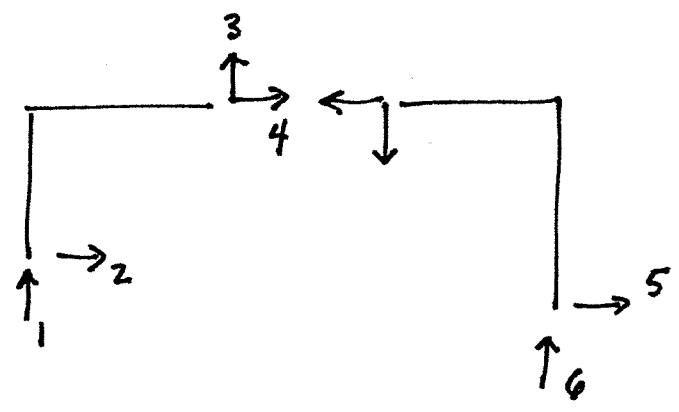
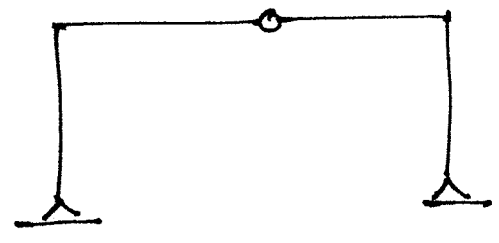


$$\begin{aligned} \sum F_x &= 0 \\ \sum F_y &= 0 \\ \sum M &= 0 \end{aligned}$$

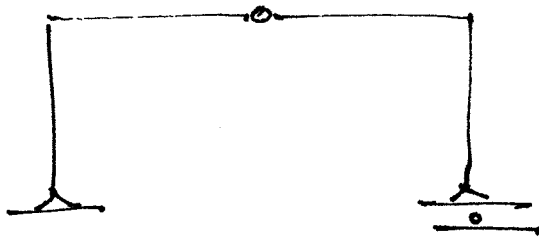
$$3S = R$$

\downarrow \downarrow
 # solids RESTRAINTS.

STABLE
 IT HAS ENOUGH
 CONSTRAINTS AND
 THEY ARE PLACED
CORRECTLY

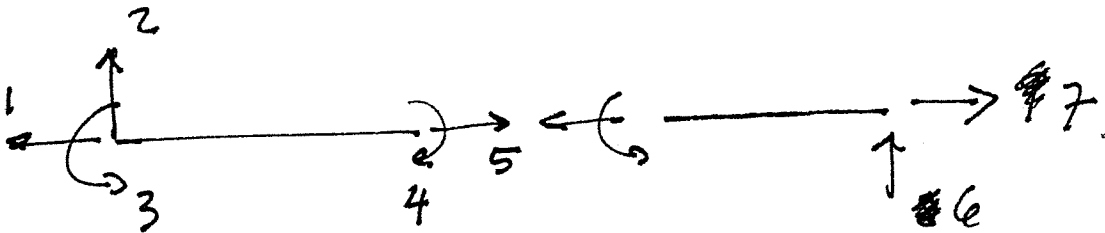
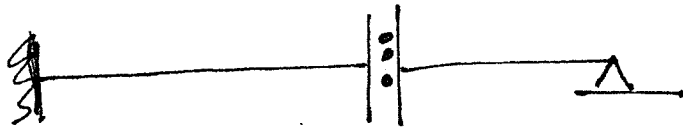


$$\begin{aligned} R &= 6 \\ S &= 2 \\ 2(3) &= 6 \checkmark \\ \text{DETERMINATE.} \\ &\downarrow \\ \text{STABLE.} \end{aligned}$$



NOT ENOUGH
RESTRAINTS

UNSTABLE

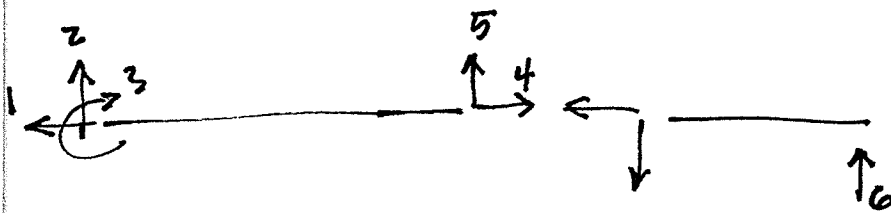
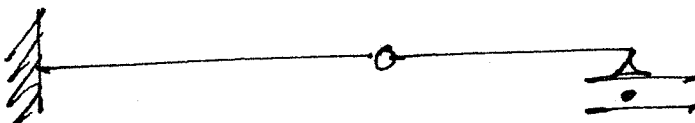


$$2(3) = 6 < 7$$

STATICALLY INDETERMINATE

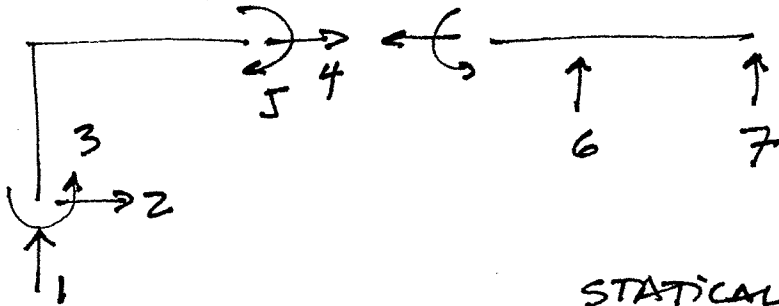
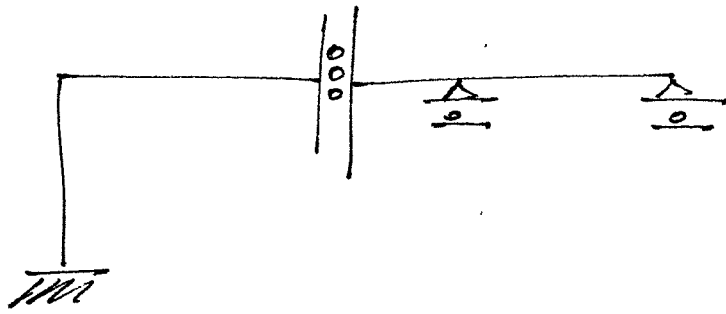
BUT

UNSTABLE.

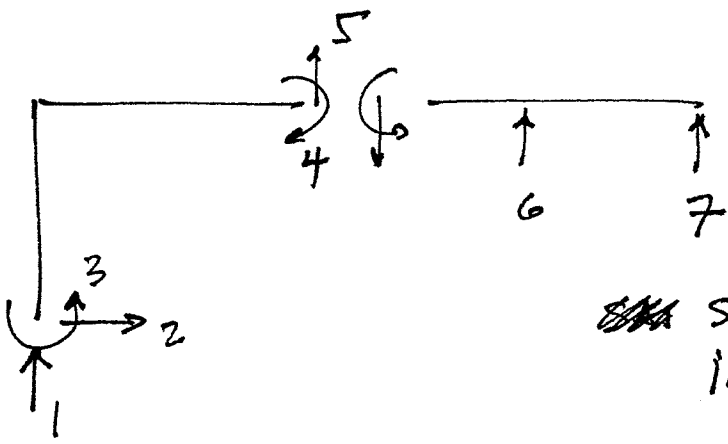
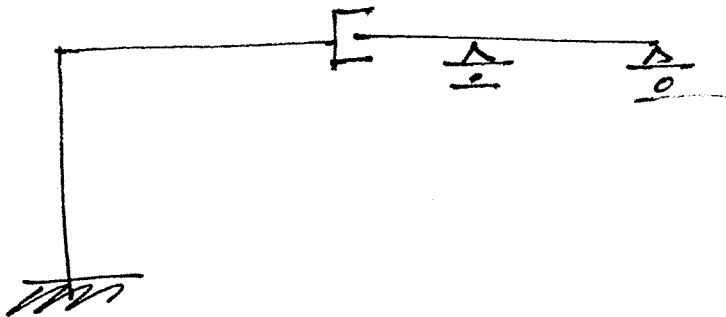


STATICALLY
DETERMINATE

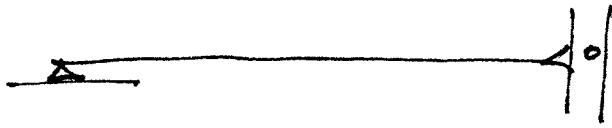
STABLE.



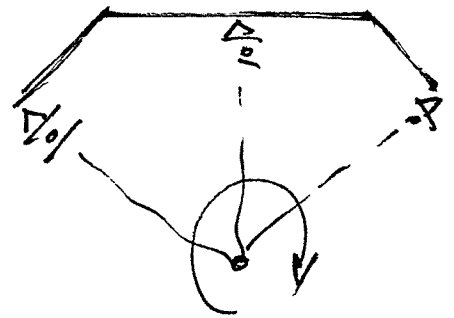
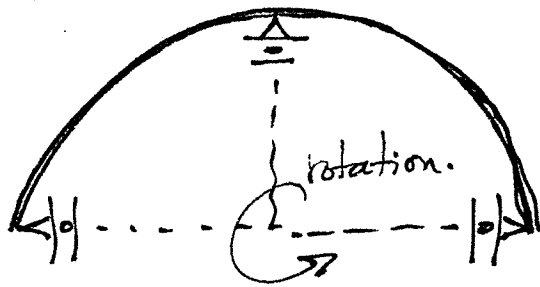
STATICALLY INDETERMINATE
STABLE



~~STATICALLY~~ INDETERMINATE
UNSTABLE

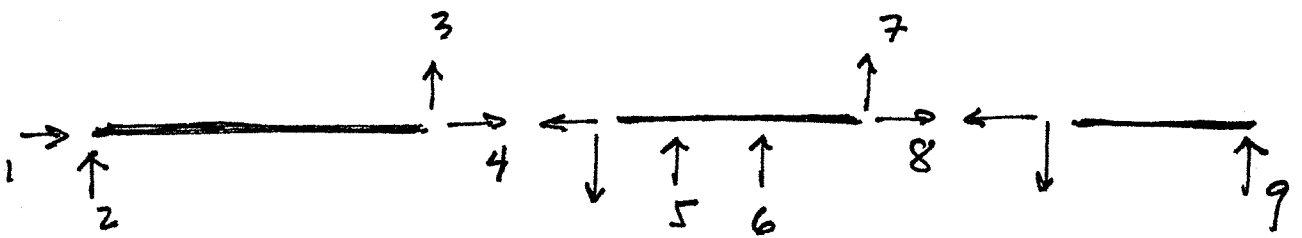
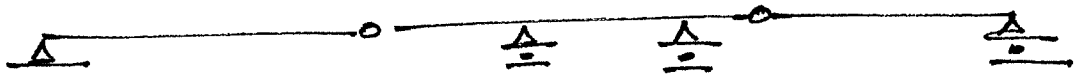


STATICALLY DETERMINATE
UNSTABLE.



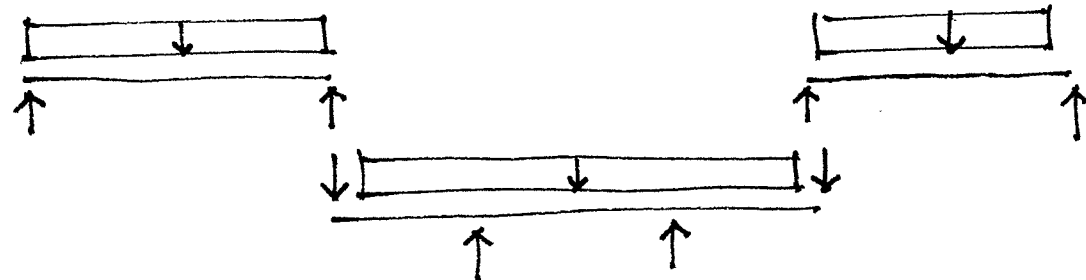
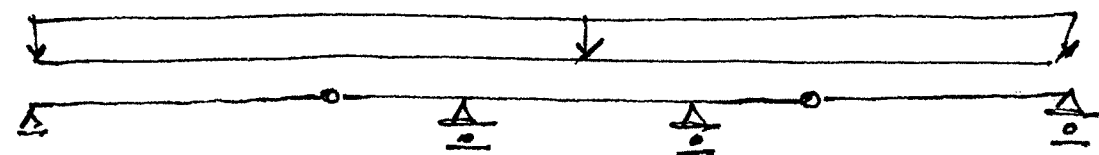
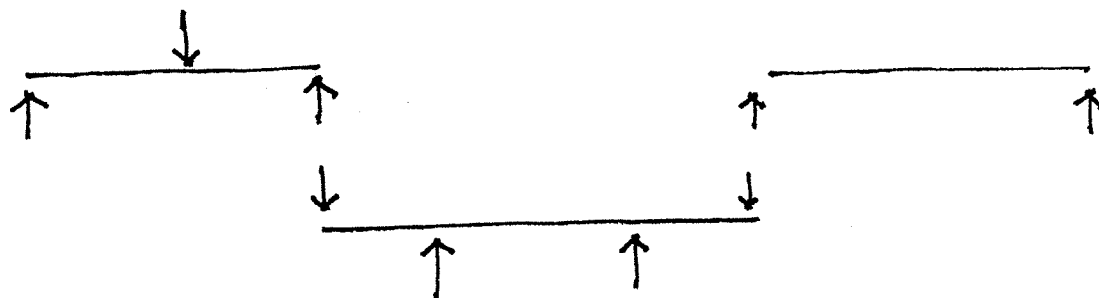
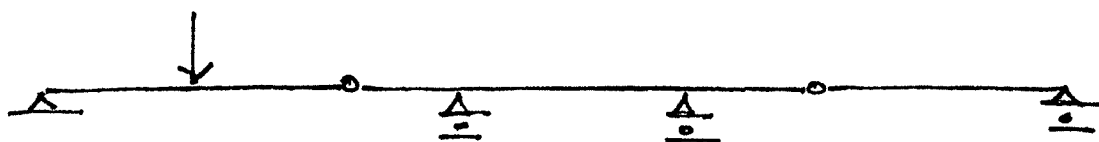
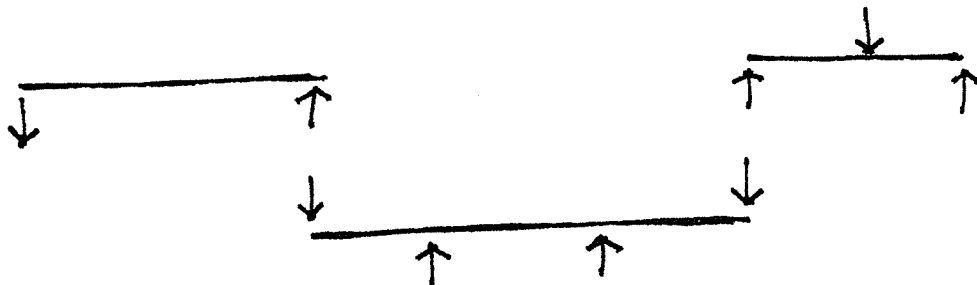
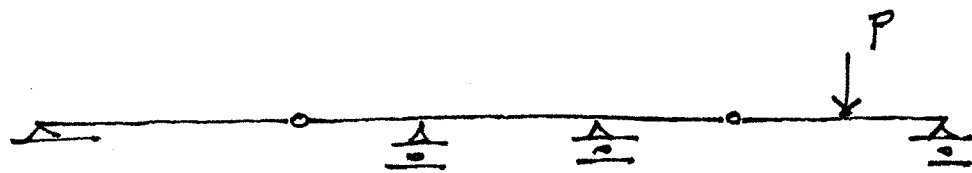
STATICALLY DETERMINATE
UNSTABLE.

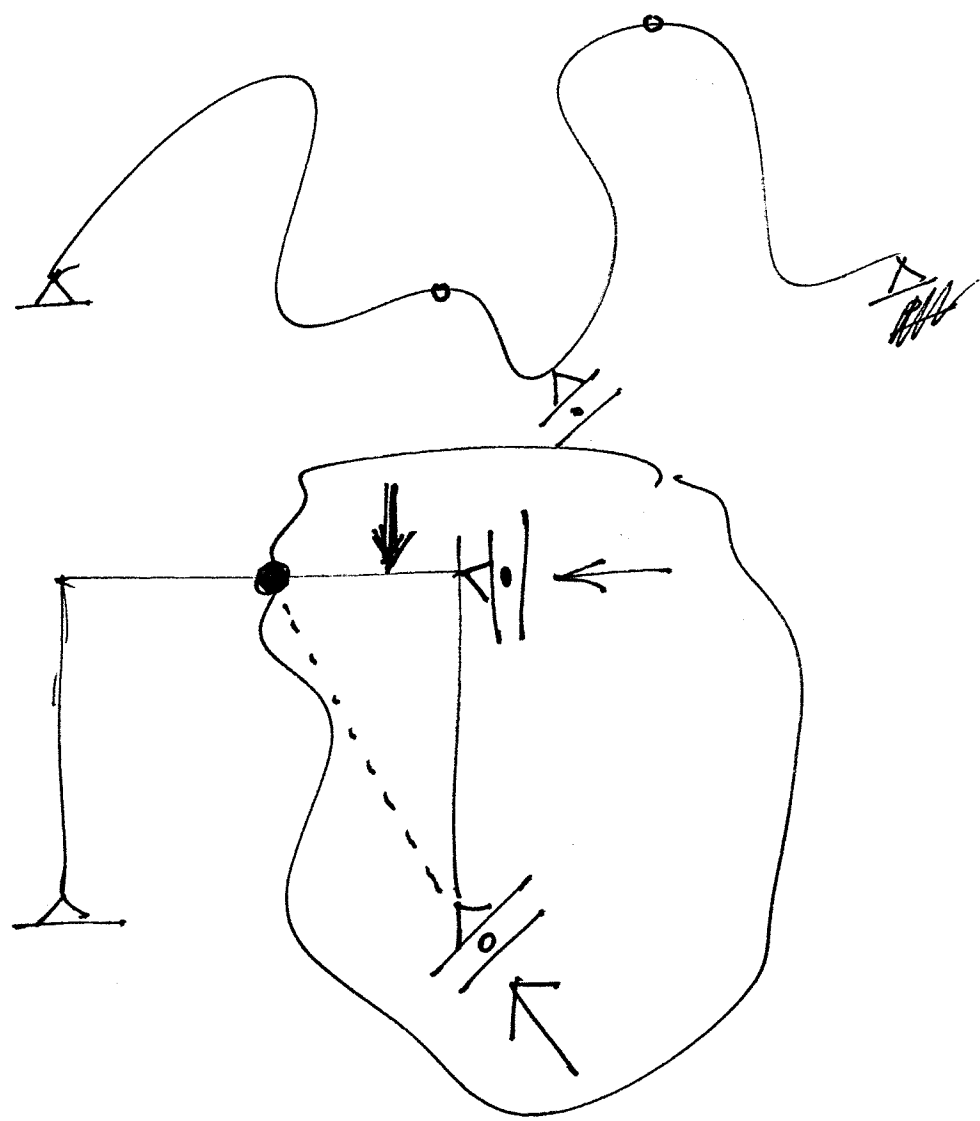
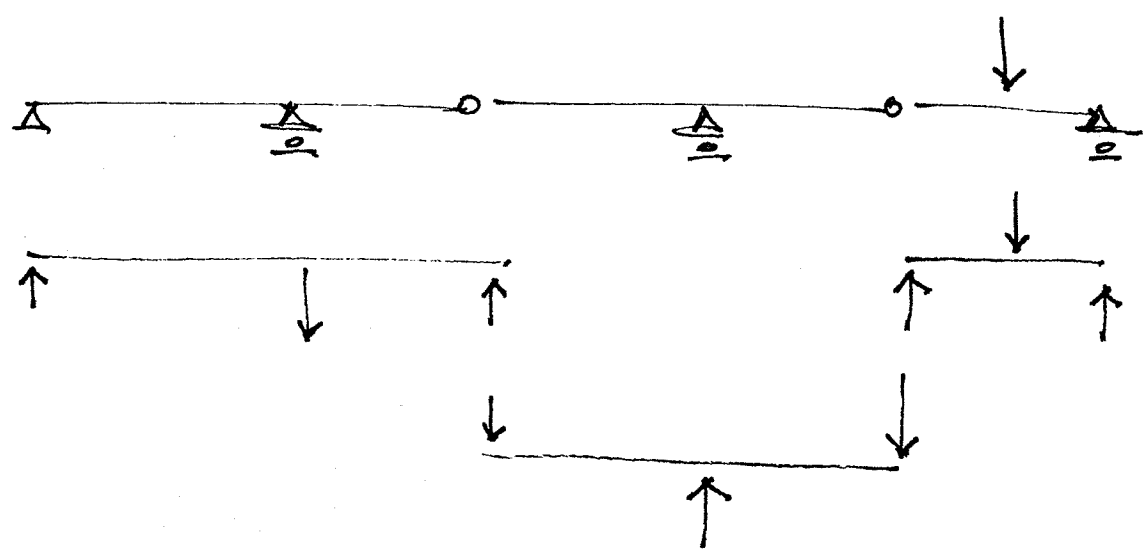
Gerber Beam.



STATICALLY DETERMINATE
STABLE.

7/11/19





Handwritten text, possibly a name or signature, oriented vertically on the left side of the page.