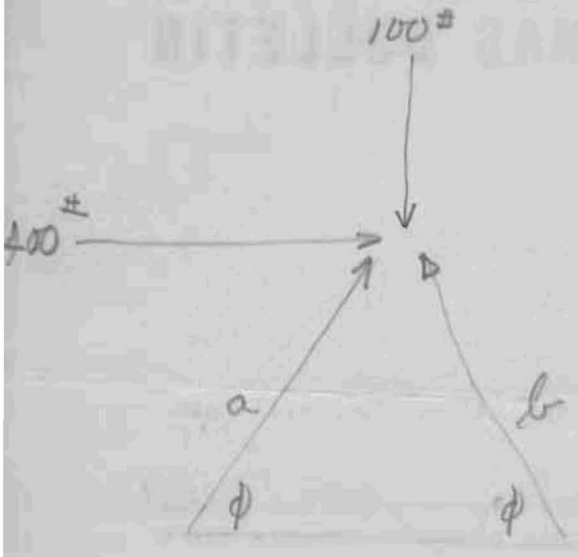
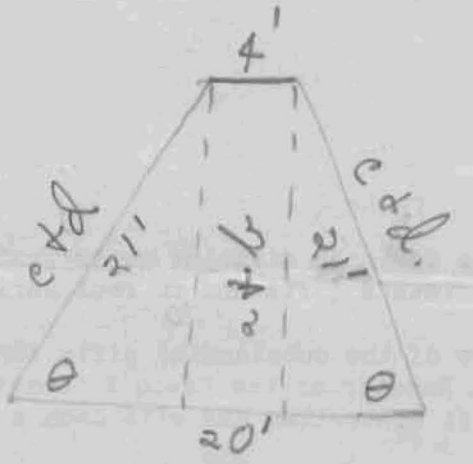
Analysis of Wind on Drum.
Machine Verticle





$\phi = \cos^{-1}\frac{8}{19.4} = \cos^{-1}.431 = 65\frac{1}{2}^\circ$

$\sin\phi = .910,$

$\theta = \cos^{-1}\frac{8}{21} = \cos^{-1}.381 = 67\frac{1}{2}^\circ$

$\sin\theta = .925,\ a+b = 19.4$ ft.

100# equals weight of drum, ring, etc.

400# " wind load of 20#/sq ft x 5x4 sq ft.

$400 + a\cos\phi = b\cos\phi$ (horizontal)

$100 = a\sin\phi + b\sin\phi$ (verticle)

$b = 540^{\#},\ a = -425^{\#}$

$c = \frac{540}{2}\cdot\frac{1}{.925} = 292^{\#}$ per leg compression

$d = -\frac{425}{2}\cdot\frac{1}{.925} = -230^{\#}$ per leg compression