$$
W=36 \mathrm{lb} \quad \bar{k}_{G}=4 \mathrm{im} . \quad P=13 \mathrm{~b}
$$



$$
r=3 \text { in. } \quad R=6 \text { is. }
$$

Rolls wro slipping $\bar{I}=m \bar{k}_{q}^{2}$

$$
\vec{a}_{G}=? \quad \mu_{2}=?
$$



Mnknowns: $\alpha, N, M_{k}$

$$
\begin{gathered}
+S \sum M_{c}: \quad \frac{3}{12}(13)=\frac{36}{3^{2} \cdot 2}\left(\frac{4}{12}\right)^{2} \alpha+\frac{6}{12}\left(\frac{36}{32.2}\right)\left(\frac{6}{12} \alpha\right) \\
\therefore \alpha=\square \quad a_{G}=R \alpha=D \quad \quad \vec{a}_{G}=\square \text { 付/2 }
\end{gathered}
$$

$+\uparrow \Sigma \tau_{y}: \cdots \cdots \quad N=\varnothing$
$\pm \sum V_{x}: \cdots \cdots . \quad \mu_{\mu}=0$

$$
\mu_{2}=\square
$$

16.108
$m=10 \mathrm{~kg} \quad \bar{k}=120 \mathrm{~mm}$


Rolle w/o plipping $\vec{\omega}=5 \mathrm{rad} / \mathrm{k} 2$

$$
b=60 \mathrm{~mm} \quad r=200 \mathrm{~mm}
$$

$\vec{\alpha}=? \quad \vec{c}=?$


$$
\begin{aligned}
& \vec{a}_{G}=\vec{a}_{G / 0}+\vec{a}_{0}= \\
& {\left[\begin{array}{c}
0.06(5)^{2} \rightarrow ब \\
0.06 \alpha
\end{array}\right]+\left[\begin{array}{c}
0.2 \alpha \\
0
\end{array}\right]} \\
& =\left[0.06(5)^{2}-0.2 \alpha\right] \vec{i}-0.06 \alpha \vec{j}
\end{aligned}
$$

Maknowns: $c_{x}, c_{y}, \alpha$

$$
\left.\begin{array}{lll}
+S \sum M_{c}: \cdots . . . \\
+\uparrow \Sigma V_{y}: \ldots . . \\
+\Sigma V_{x}: \cdots
\end{array}\right\} \begin{array}{ll}
\alpha=0 & \vec{\alpha}=\square \operatorname{cad} / /^{2} 5 \\
c_{y}=0 \\
c_{x}=0 & \vec{C}=-c_{x} \vec{i}+c_{y} \vec{j} N
\end{array}
$$

