

41

DATE

9-18-44

SUBJECT OF EXPT.

Sw Spring (Plum)

$$\frac{P}{F} = \frac{G d^4}{8 D^3 N}$$

$$\begin{aligned} 0.28 &= d \\ .141 &= D \\ 8 &= N \end{aligned}$$

$$= \frac{11,500,000 (.000000615)}{64 (.00268)} = 41.2 \text{ #/in}$$

$$41.2 (x - 380) = 3.5$$

$$x = \frac{3.5}{41.2} + 380 = .465 = \text{FREE LENGTH}$$

$$\text{WT COCKED} = .465 - 380 (41.2) = 3.5$$

$$\text{FIRED} = \text{ " } - 340 \text{ " } = 5.1$$

$$\text{STUCK} = \text{ " } 757 \text{ " } = 8.8$$

$$\text{80\%} = \text{ " } 171 \text{ " } = 7.0$$

$$S = P \frac{FMS (.137)}{.0000219} K = P 16,700 K$$

$$\frac{D}{d} = 5 \quad K = 1.31$$

$$\text{COCKED } S = 3.5 (16,700) 1.31 = 74,000$$

$$\text{FIRED } S = 5.1 \text{ " " } = 108,000$$

$$\text{STUCK } S = 8.8 \text{ " " } = 187,000$$

$$\text{80\% } S = 7.0 \text{ " " } = 148,000$$

EXPERIMENTER

WITNESS

DATE

DATE