

Drawings, Models and Calculations

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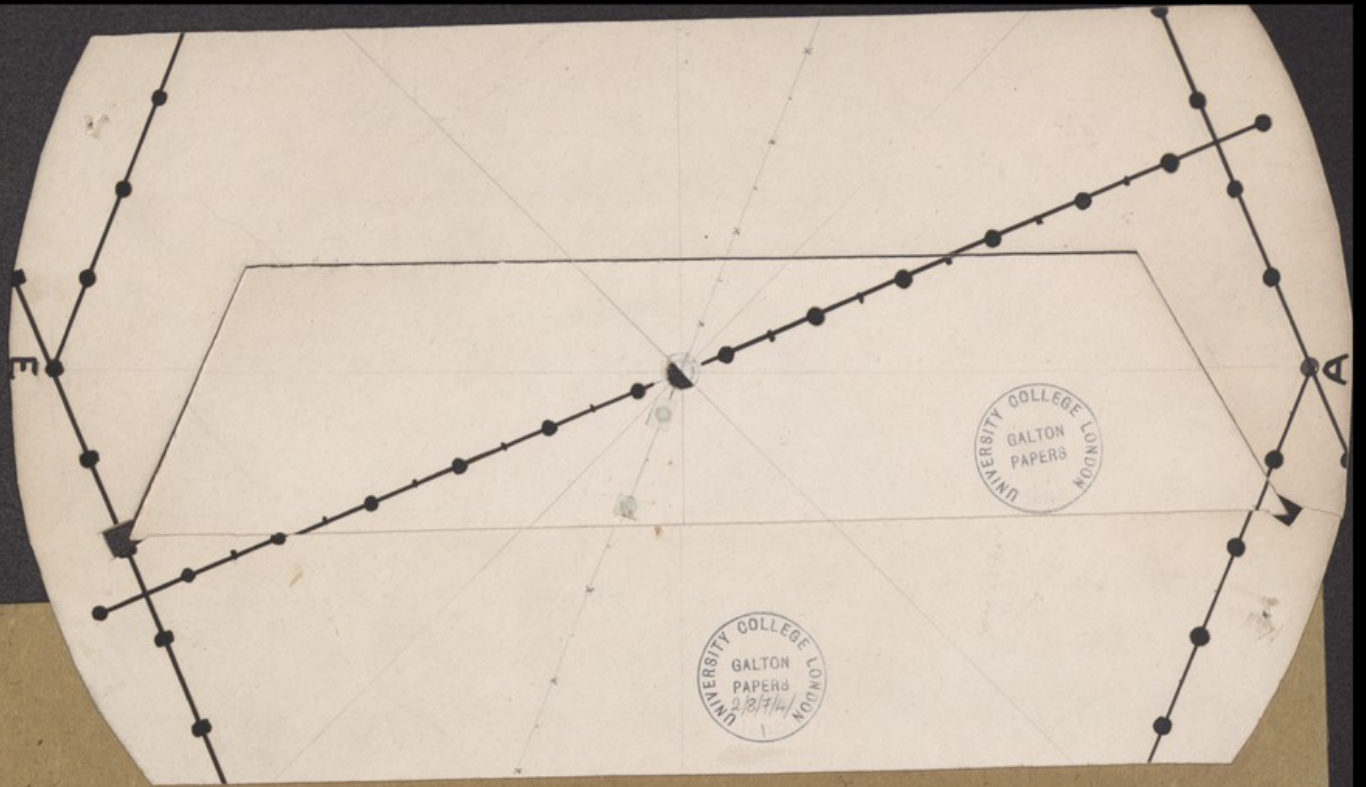
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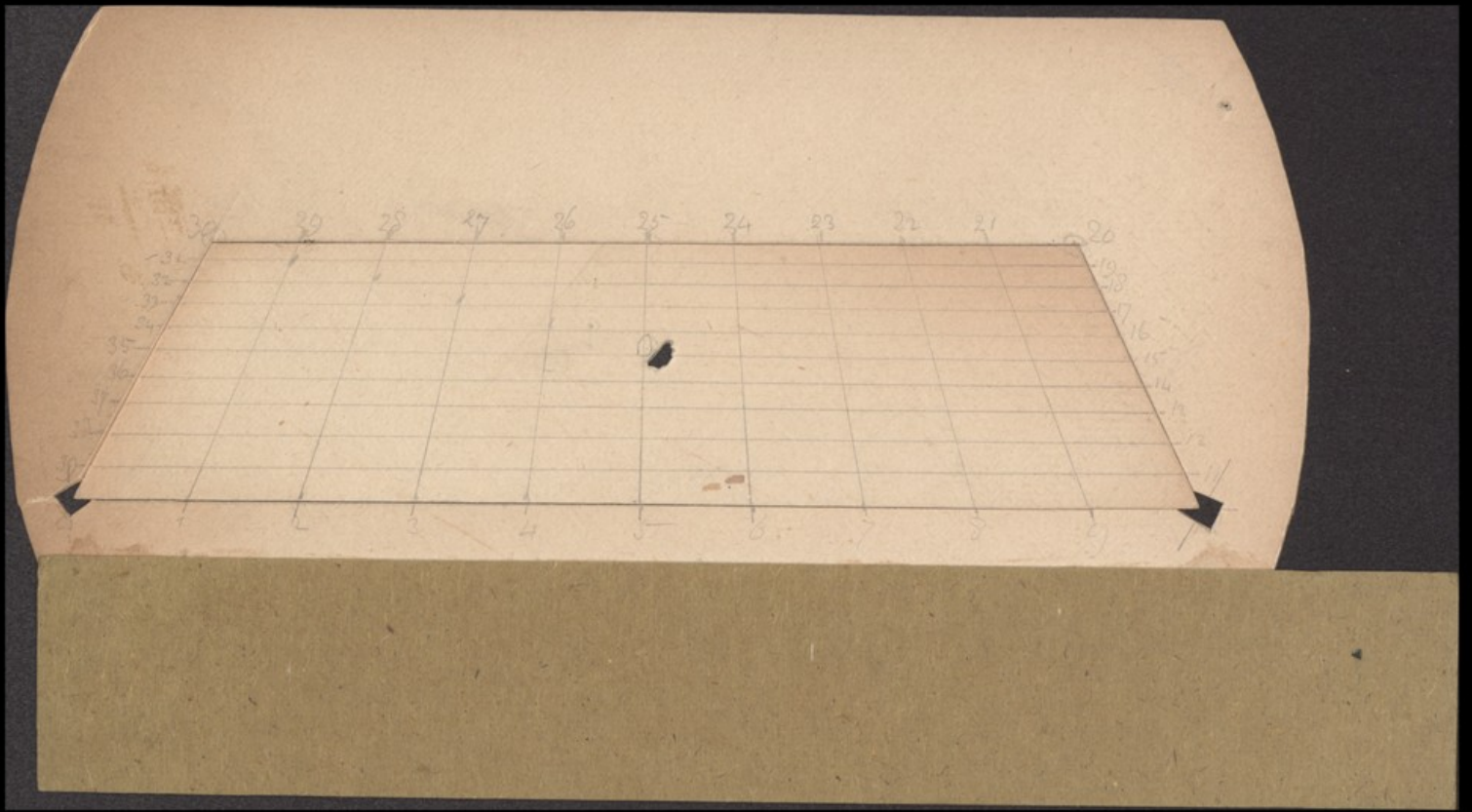
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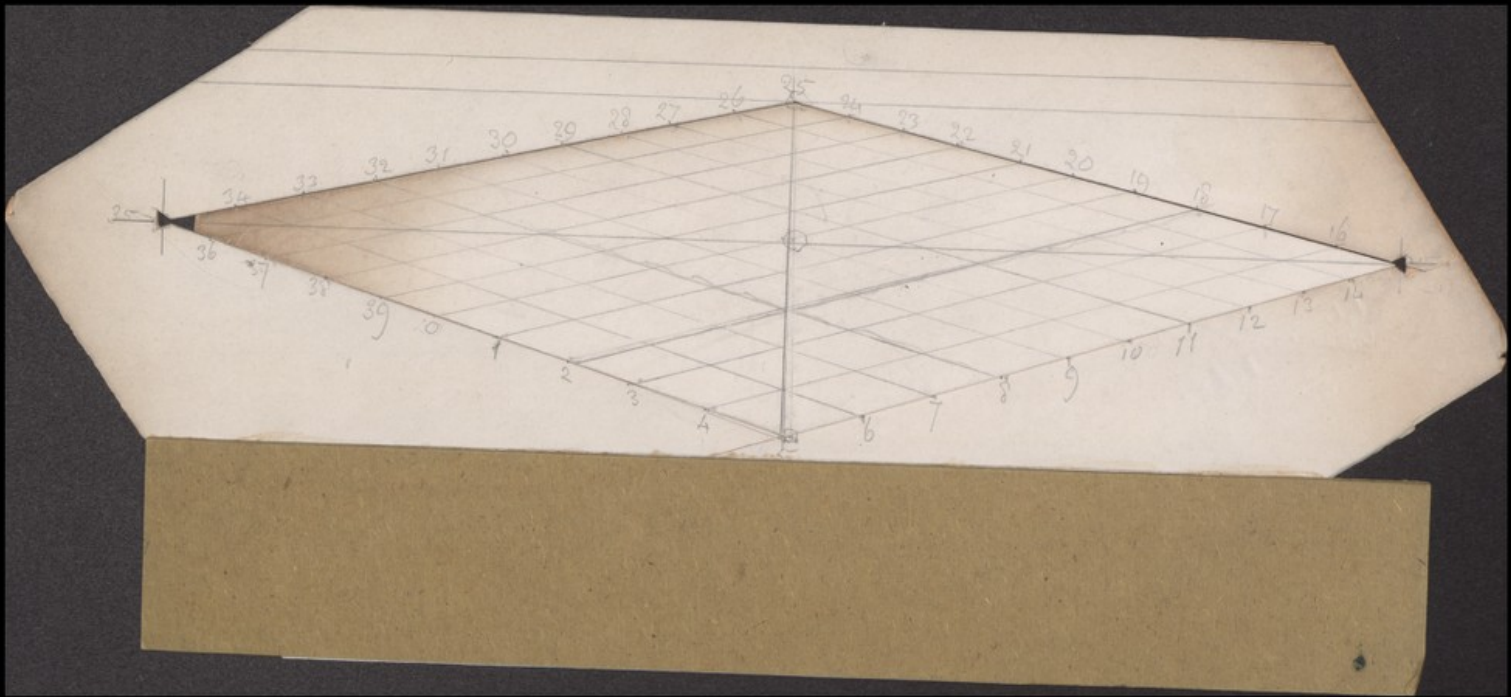
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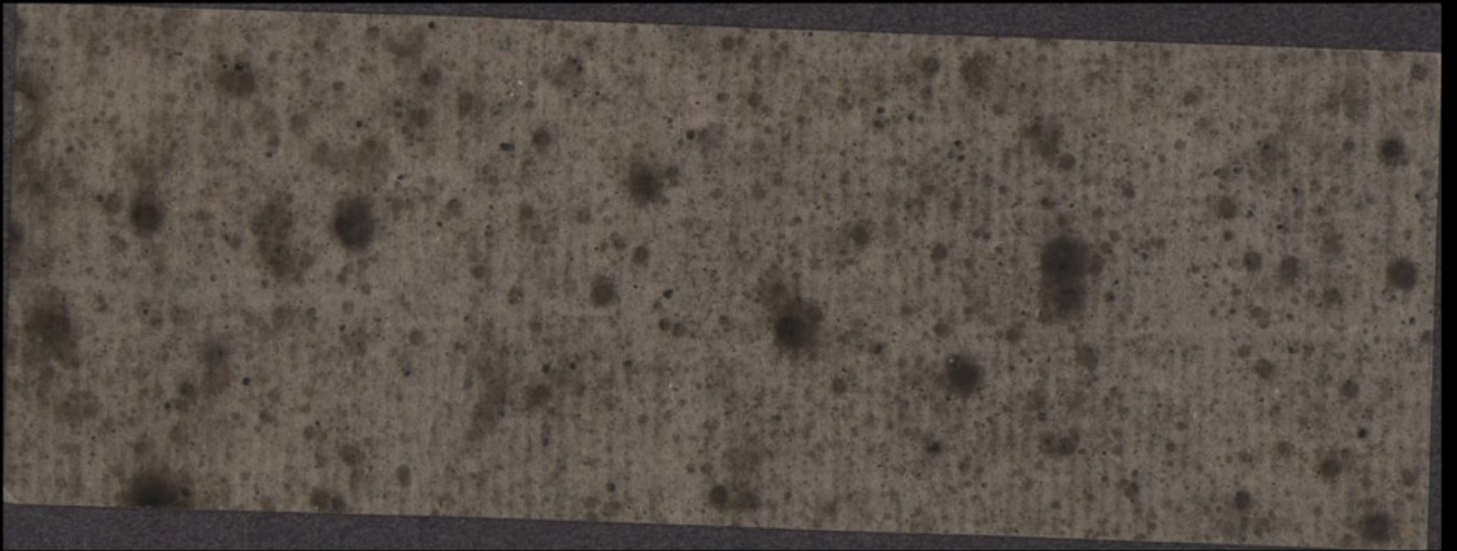


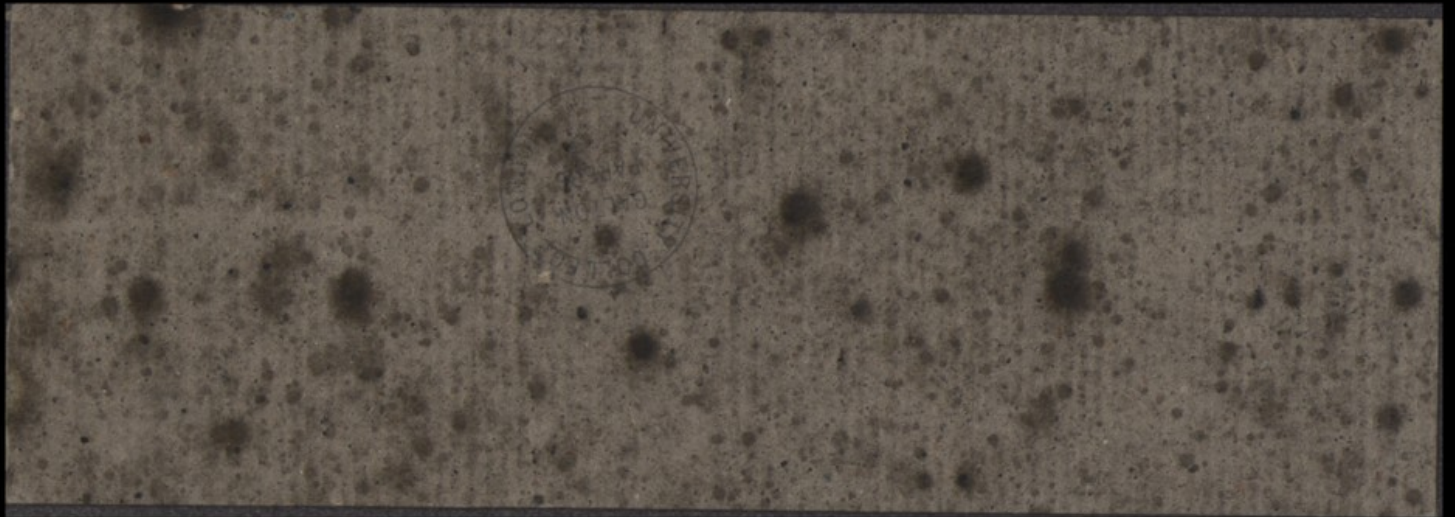
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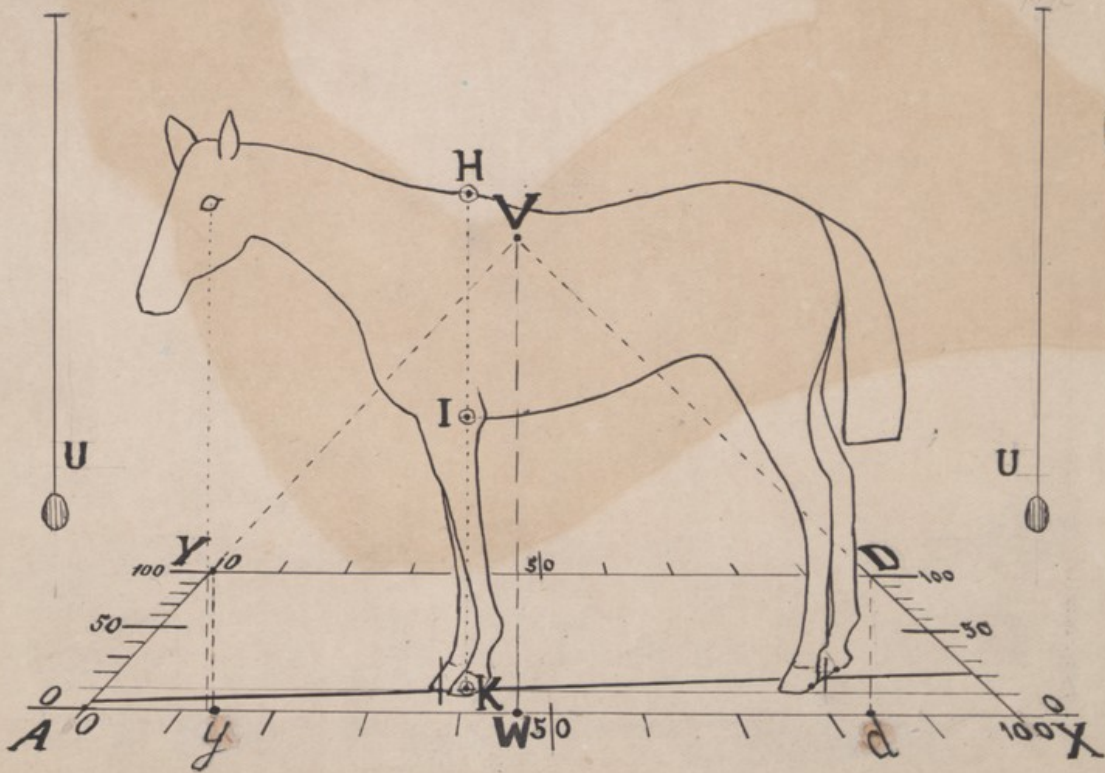




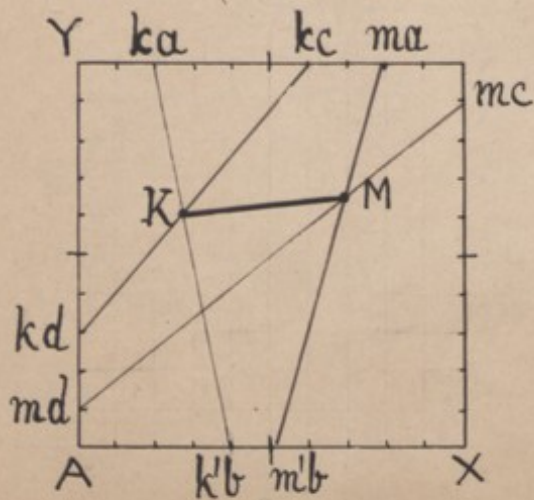
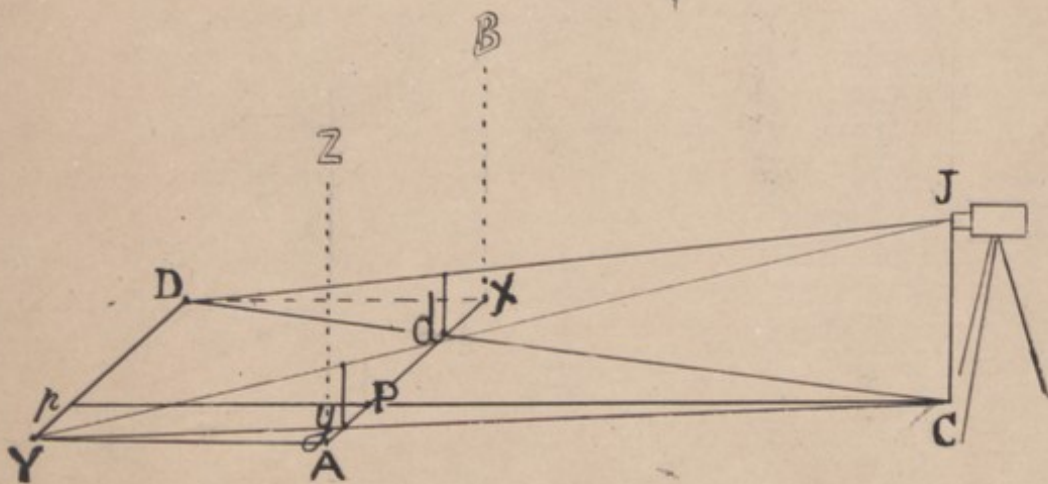
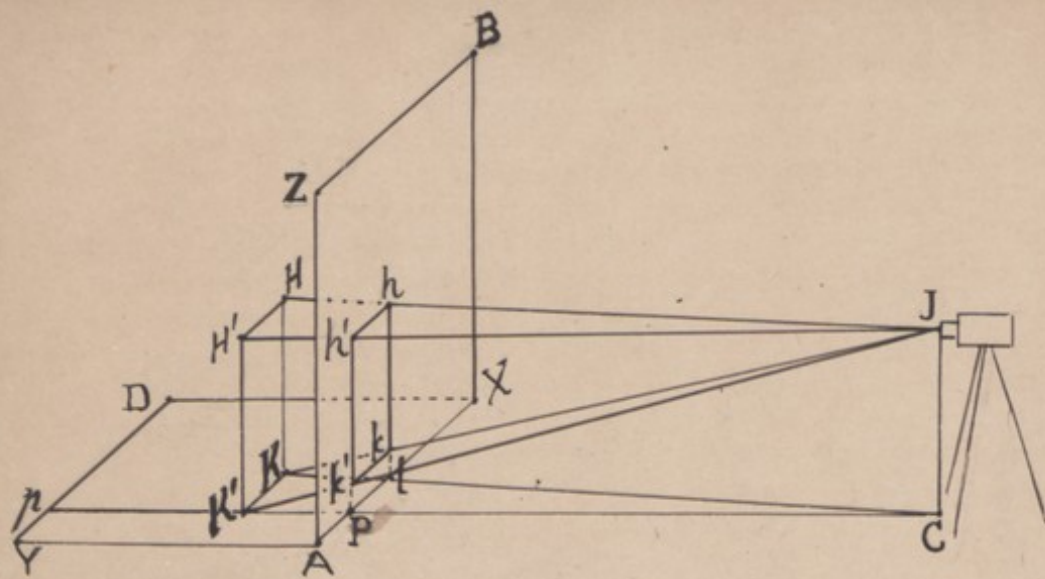




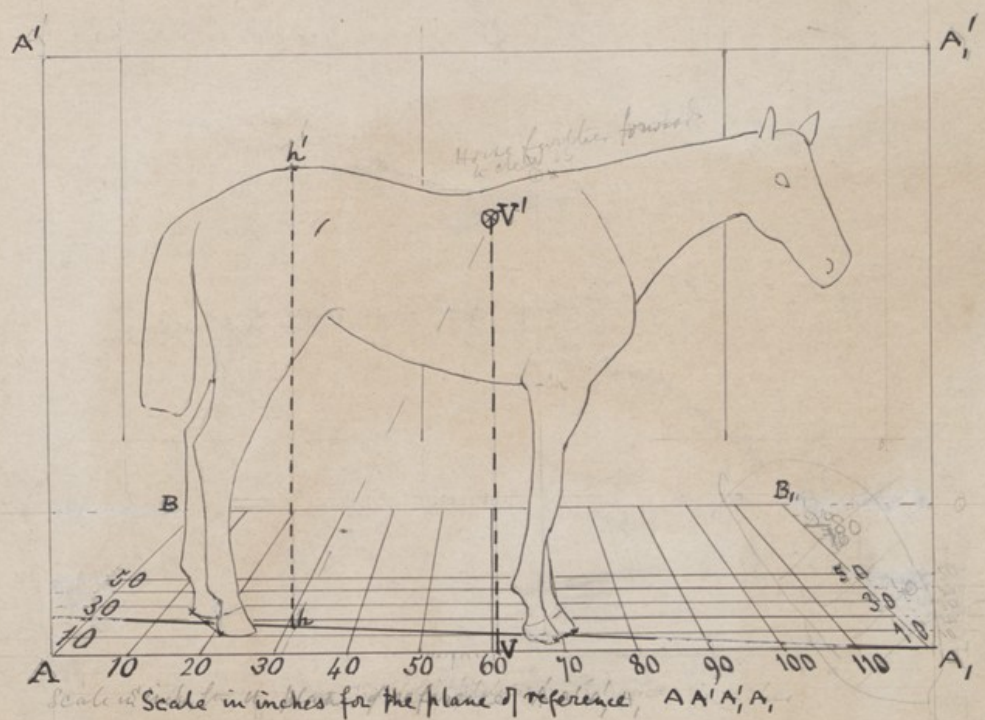
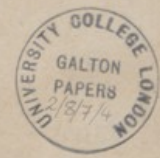




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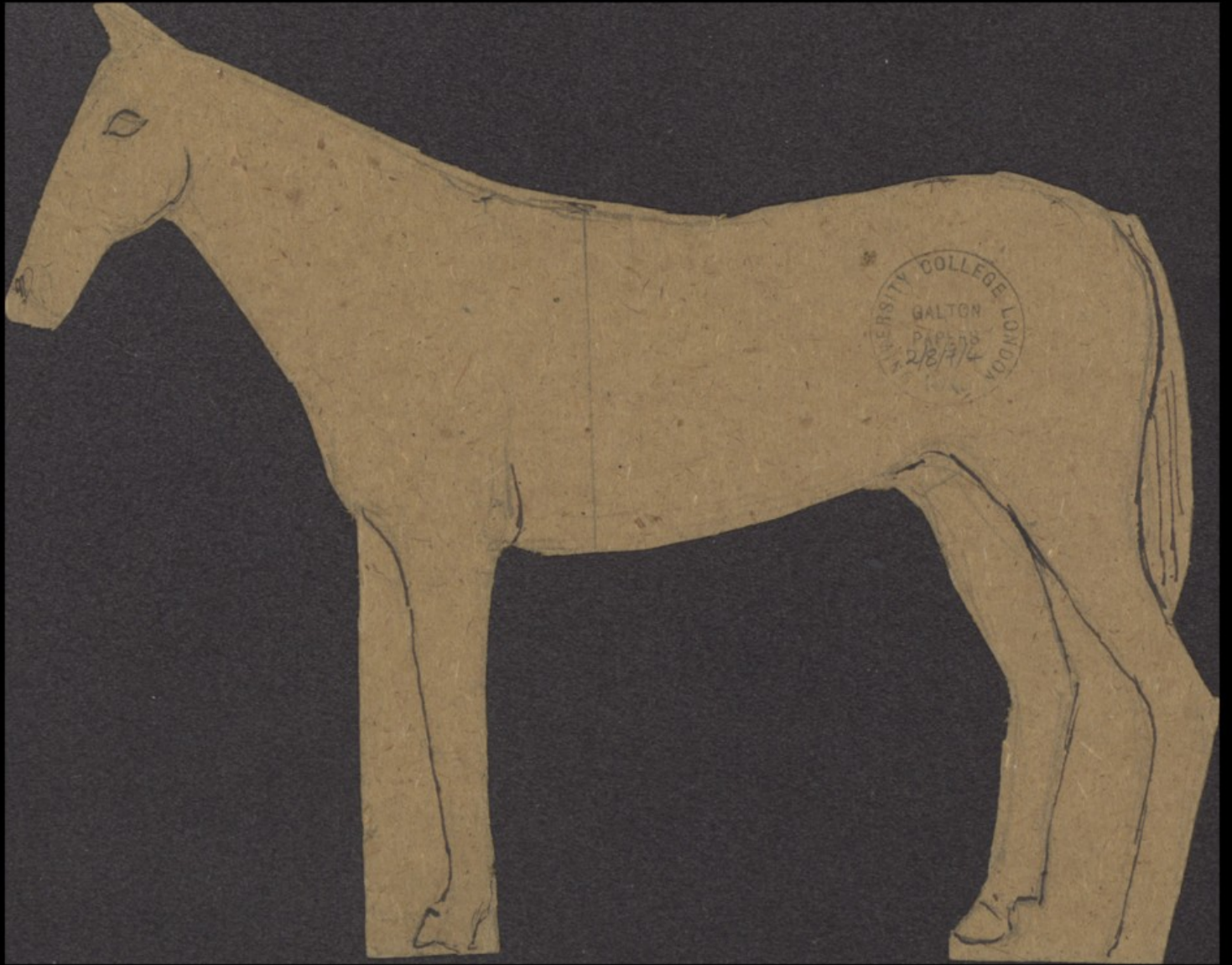
Handwritten notes at the top right corner.

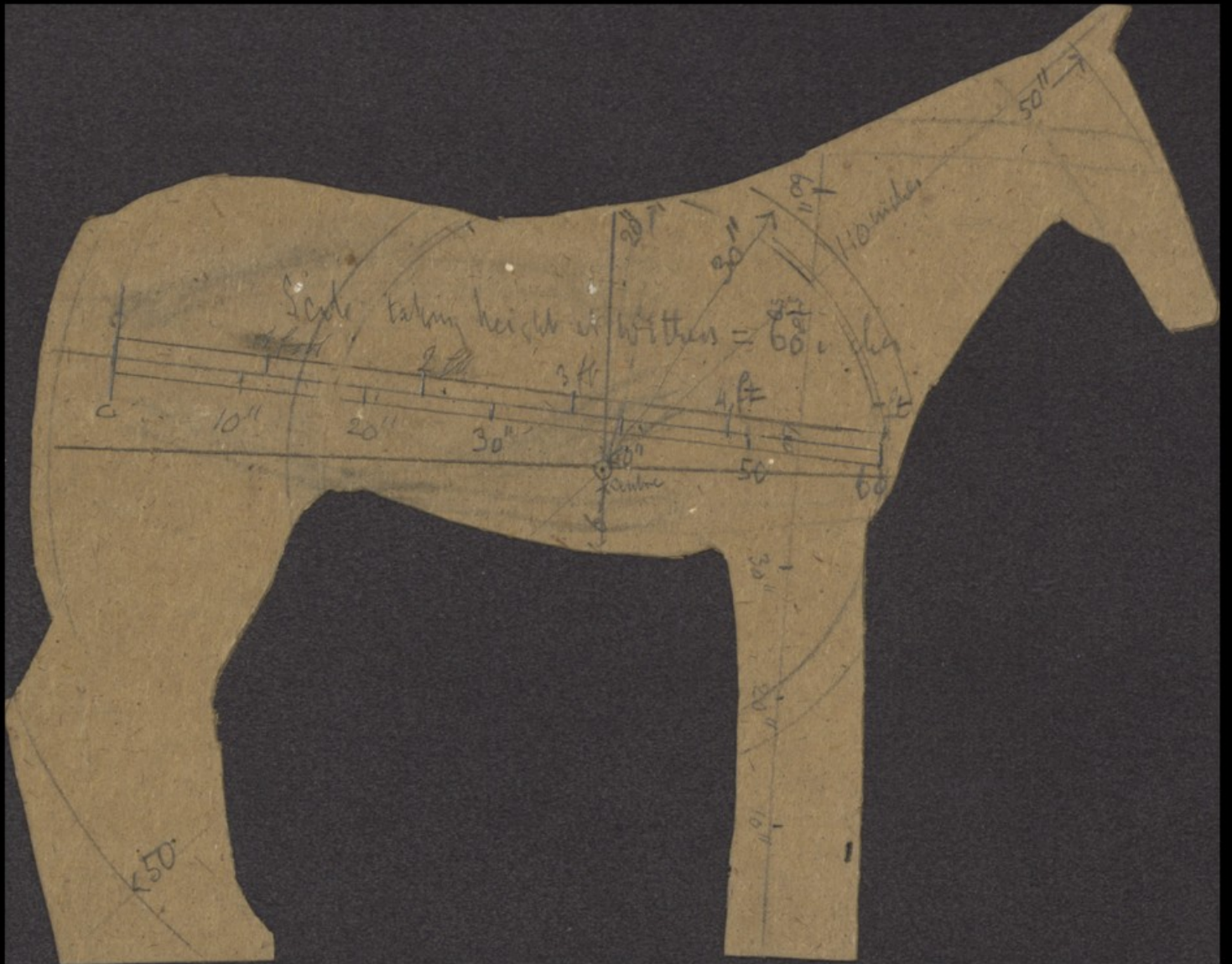


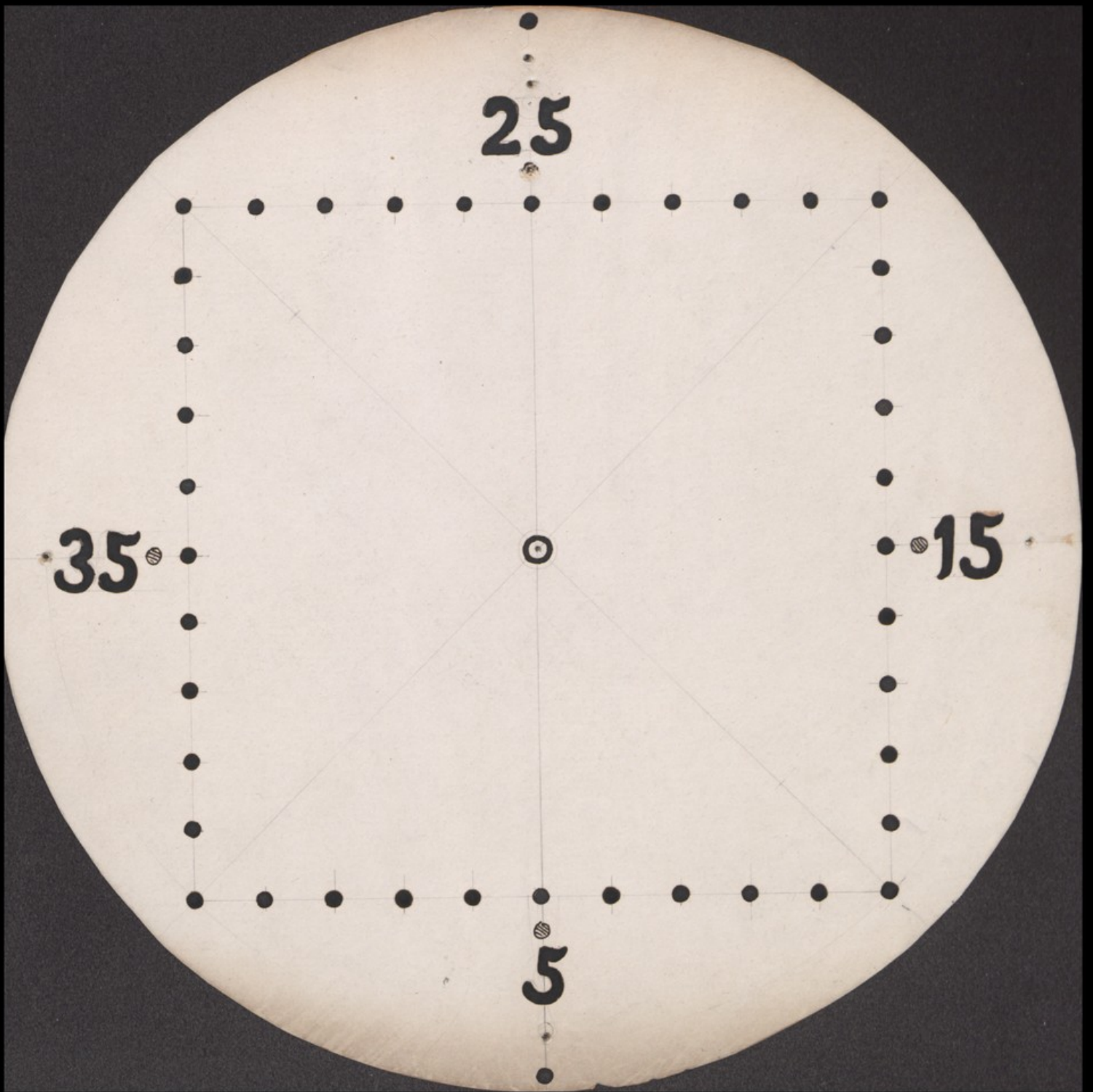
Handwritten notes on the left side: "The angle $APB = 120^\circ$ and mark the 60, 80 & 120"

Handwritten notes on the left side: "graduated in inches"

Handwritten notes at the bottom right corner.







68/261 = 13.85
204
57.5
54.4
310

length to centre
of disc 26.15 inch
height of lens
above disc 6.8 inch

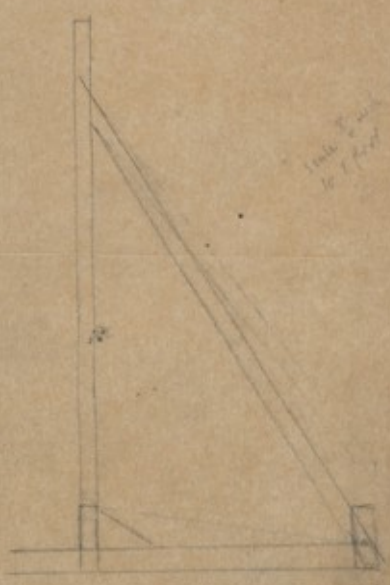
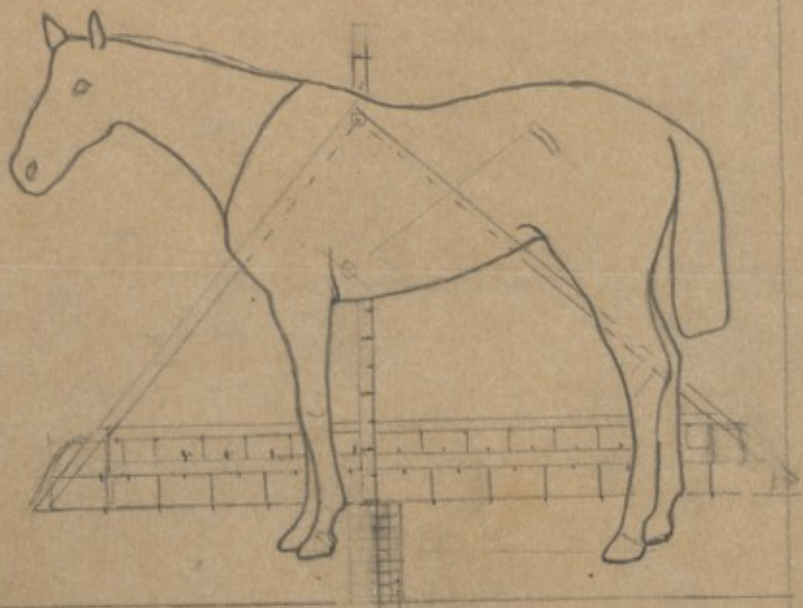


v. 7

1. 45



p. 102

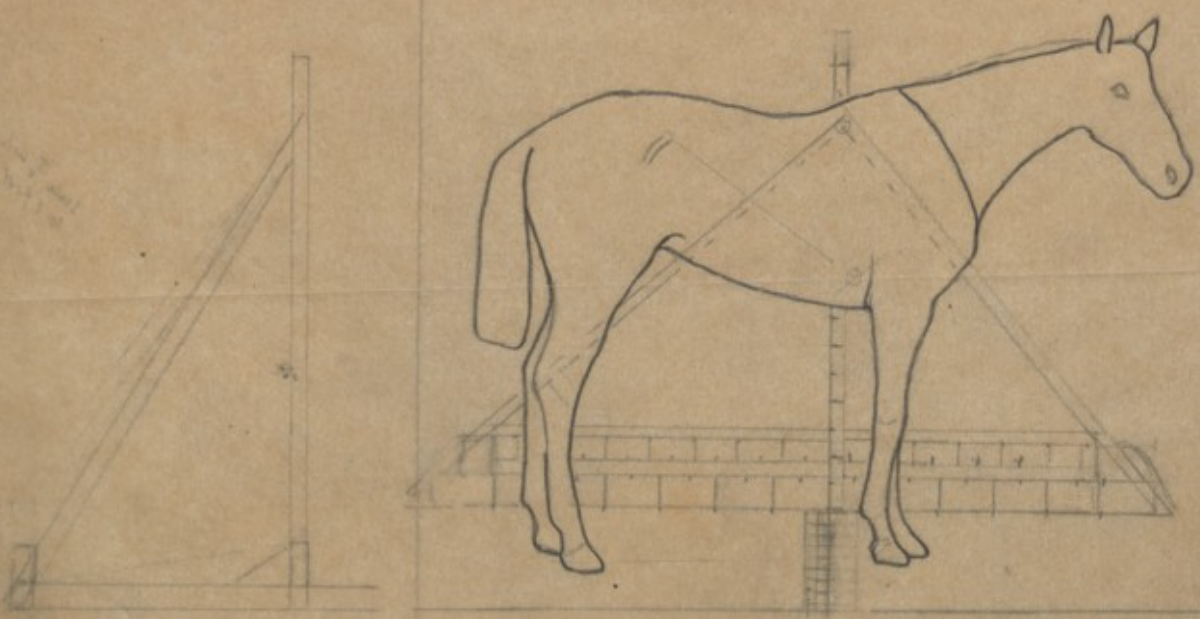


1. 45

Fig. 1



Fig. 2

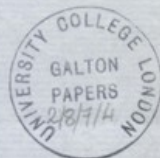
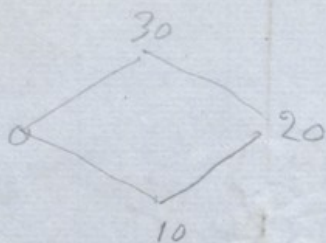
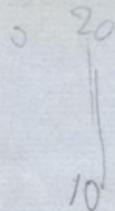
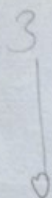


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39 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
5 10 15 20 25

20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 0
25 30 35 0 5



Given $a = 5 \text{ feet} = 60''$
 $d = 20 \text{ feet} = 240''$
 $b = 20''$ } to find $x_1 + x_2 = x$

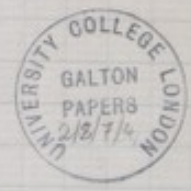
$d = 240$
 $b = 19$ } — " = x'

then the value of $x' - x$

$$\frac{20 \times 240}{220} = \frac{4800}{220} = \cancel{218} 218$$

$$\frac{19 \times 240}{221} = \frac{4560}{221}$$

$$\frac{20 \times 60}{220} = \frac{1200}{220} = 5.45$$



0.522
 1.53
 6.13

differe = 0.02

$$\frac{20 \times 60}{221} = \frac{1200}{221} = 5.43$$

$$\frac{40 \times 60}{200} = 12.00$$

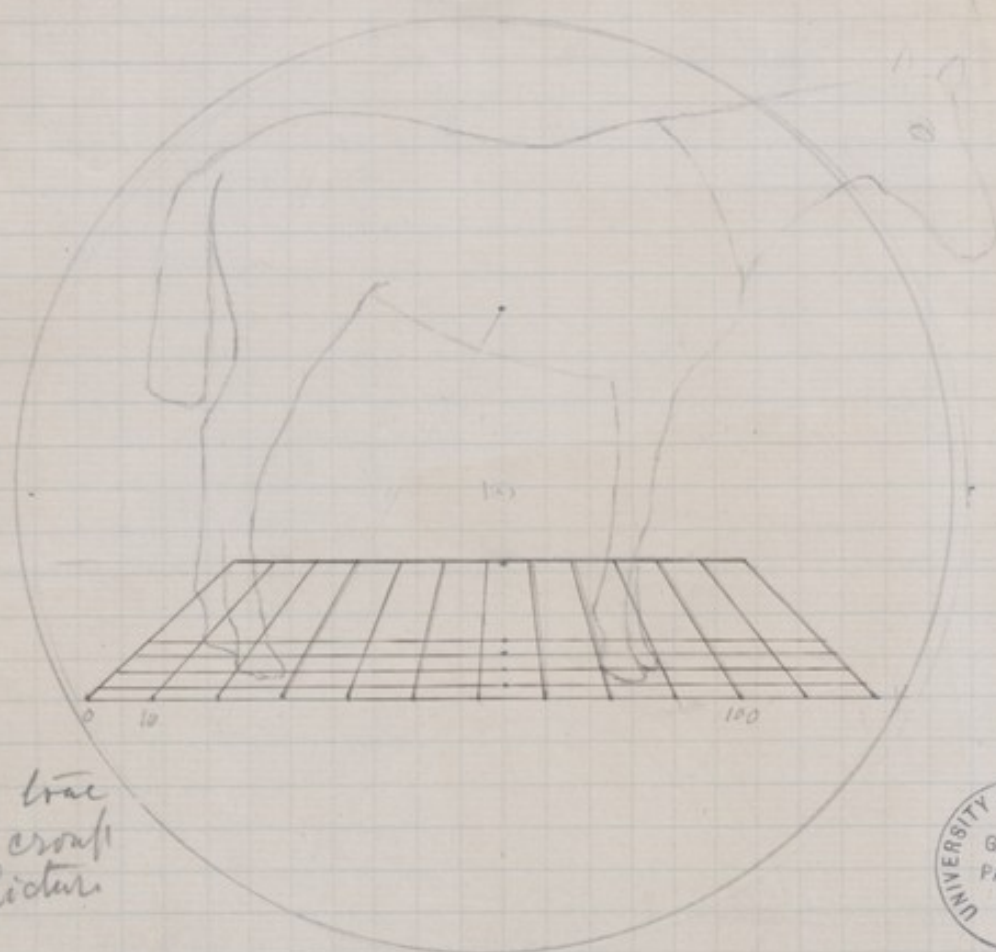
$$\frac{b=15 \times 900}{225} = 4.00$$

Value of $x_1 + x_2$

$b = 30$
 $\frac{ba}{d-b} = \frac{30 \times 60}{210} = \frac{1800}{210} = 8.57$
 $b = 20$ ————— 5.45
 ————— 3.12

$b = 25$	$\frac{25 \times 60}{225} = \frac{1500}{225} = 6.67$	$b = 45$ $\frac{45 \times 60}{195} = \frac{2700}{195} = 13.85$
$b = 35$	$\frac{35 \times 60}{205} = \frac{2100}{205} = 10.25$	$= 13.85$
$b = 20$	$\frac{20 \times 60}{220} = \frac{1200}{220} = 5.45$	$\frac{1}{25} \text{ for } 5'' \text{ value photo interval}$
25	6.98	1.53 0.06
30	8.57	1.59 0.06
35	10.25	1.68 0.07
40	12.00	1.75 0.07
45	13.85	1.85 0.07

$1.7 : .06 = 1 : x$
 $x = \frac{.06}{1.7} = .035$ or 0.035 diff^{ca} in side scale of photo
 corresponds to a woods of about 1.0 wd in apparent height of horse



To find true
height of cross
in the picture



$$EF = 40 \quad ef = 60 \quad d = 15 \text{ by measure on this scale}$$

$$L = 40 \quad \lambda = 60$$

$$b = 100 \text{ (hereafter make it } 120 \text{ ft} = 120 \text{")}$$

$$a = \frac{bL}{\lambda - L} = \frac{4000}{20} = 200 \text{''}$$

$$a + d = 215$$

$$\sigma = hh' = 63.5 \text{ by measure on (fiducial) scale}$$

$$s = H/H' = \sigma \cdot \frac{a+d}{a} = 63.5 \cdot \frac{215}{200} = \frac{13652.5}{200} = 68.26$$

$$\text{Subtract } d = 5$$

$$63.5 \times \frac{205}{200} = \frac{13017}{200} = 65.08 \text{ by 5 in under } 1\frac{1}{2} \text{ inch diff.}$$