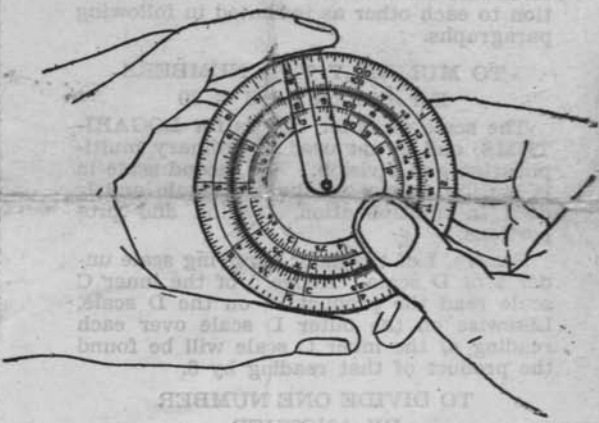


INSTRUCTIONS ON THE OPERATION

# THE MASCOT SLIDE RULE MANUAL

Fig 1



TO DIVIDE ONE NUMBER  
BY ANOTHER

For example  $7.5 \div 2.5 = 3.0$

Set 7.5 of the inner revolving scale  
 over 2.5 of the outer scale  
 (C Scale). Under 2.5 on the "D" Scale  
 read 3.0 on the inner "C" scale. (Note  
 when the slide is set the hair line of the  
 rule may be set on 2.5 of outer "D" Scale  
 to read 3.0 on inner "C" Scale.)

## INSTRUCTIONS ON THE OPERATION OF THE MASCOT VEST POCKET SLIDE RULE

Mechanically this rule works scale against scale in the same manner as the ordinary straight slide rule and any one familiar with the conventional type of slide rule can work the MASCOT.

It is operated by placing the thumb on top disc and revolving it clockwise or contra clockwise until factors are in desired relation to each other as indicated in following paragraphs.

### TO MULTIPLY TWO NUMBERS

For example  $5 \times 6 = 30$

The scale on outer ring is for LOGARITHMS, and is not used in ordinary multiplication and division. The second scale in is usually known as the "D" Scale and is used in multiplication, division and proportions.

Set No. 1 of the inner revolving scale under 6 of D scale. Above 5 of the inner C scale read the product 30 on the D scale. Likewise on the outer D scale over each reading of the inner C scale will be found the product of that reading by 6.

### TO DIVIDE ONE NUMBER BY ANOTHER

for example  $56.5 \div 2.5 = 22.6$

Set No. 1 of the inner revolving scale ("C" Scale) under 2.5 on the outer scale ("D" Scale). Under 56.5 on the "D" Scale read 22.6 on the inner "C" scale. (Note — after the slide is set, the hair line of the rider may be set on 56.5 of outer "D" Scale to assist in reading 22.6 on inner "C" Scale.

**TO FIND A NUMBER BEARING A  
CERTAIN RATIO TO ANOTHER  
NUMBER**

for example  $7 \div 6 \times 36 = 42$

Set No. 6 of inner revolving "C" Scale under 7 of the outer "D" scale. Over 36 of inner "C" scale read 42 on outer "D" scale. This illustrates the combination of multiplication and division into a single operation. Note that the 6 may be set to either of the factors of 7 or 36, whichever will require the least turning of the dial, and the answer will be found opposite the other factor.

**TO FIND THE LOGARITHM OF A  
NUMBER**

for example  $\log 4.59 = 0.662$

Set cross hair at 4.59 of second ("D" scale) from outer circumference and read log at 0.662 on first scale at outer circumference.

**TO MULTIPLY THREE FACTORS AT  
ONE SETTING USE OF CI SCALE**

for example  $4 \times 8 \times 6 = 192$

Set hair line to 4 on D scale bring 8 on CI scale (4th from outer edge of rule) to hairline, then at 6 on C find 192 on D. Note that these operations all cause motion to right on D. i. e. Hairline is first set 4 units to right of beginning on D, from 8 on CI to 1 on CI carries the 1 of C 8 units further to right, then reading at 6 carries us 6 units further to the answer on D.

**TO DIVIDE A NUMBER BY TWO  
FACTORS USE OF CI SCALE**

for example  $96 \div 4 \times 6 = 4$

Set 4 on C to 96 on D, then set hairline to 6 on C.I. Read 4, answer under hairline on D. All movements this time were to left from 96.

#### TO FIND THE SQUARE OF A NUMBER

for example the square of 24 = 576

Set the cross rider hair on reverse side of rule at 24 on scale D which is the third scale from the outer circumference, and read 576 on scale A which is the second scale from outer circumference.

#### TO FIND THE SQUARE ROOT OF A NUMBER

for example the square root of 42 = 6.48

Set the rider cross hair at 42 scale A, which is the second scale from the out circumference and read 6.48 on Scale D which is the third scale from the outer circumference.

#### TO FIND THE SINE OF AN ANGLE

for example  $\sin 30^\circ = 0.5$

Set cross hair on reverse side of scale on 30 of first scale and read 0.5 on second scale.

#### TO FIND THE TANGENT OF AN ANGLE

for example  $\tan 20^\circ = 0.364$

Set cross hair on 20 on fourth scale from outer circumference on reverse side of rule and read 0.364 on third scale from outer circumference.