

THE
MANNHEIM
SLIDE RULE

COMPLETE MANUAL

WITH

TABLES OF SETTINGS, EQUIVALENTS AND GAUGE POINTS

BY WM. COX

PUBLISHED BY

KEUFFEL & ESSER CO.

NEW YORK, 127 Fulton St

General Office and Factories, HOBOKEN, N. J.

CHICAGO

ST. LOUIS

SAN FRANCISCO

MONTREAL

516-20 S. Dearborn St.

817 Locust St.

30-34 Second St.

5 Notre Dame St., W.

DRAWING MATERIALS, MATHEMATICAL AND SURVEYING INSTRUMENTS, MEASURING TAPES.

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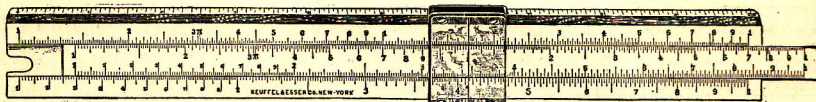
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SLIDE RULES OF ALL KINDS.

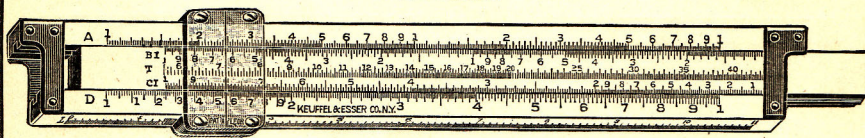
We are the only manufacturers of slide rules in America and have the largest assortment. Some of the best known of our slide rules are shown below.

MANNHEIM



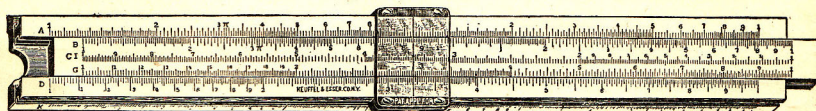
Mannheim Slide Rules can be used to advantage in every line of business. They have our patent adjustment for obtaining any desired friction of the slide. Made in 5 in., 8 in., 10 in., 16 in., and 20 in. sizes.

DUPLEX



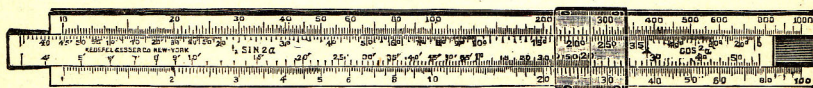
Duplex Slide Rules are practically two rules in one, with all the scales on the exterior faces, where they may be readily seen and utilized by merely turning the rule over. Made in 5 in., 8 in., 10 in., 16 in., and 20 in. sizes, with and without trigonometric scales.

POLYPHASE



The Polyphase Slide Rule is of the Mannheim type, but has an inverted C scale and a scale of cubes in addition to the regular Mannheim scales. This arrangement facilitates the solution of many problems involving three factors, as well as many powers and roots. Made in 8 in., 10 in., and 20 in. sizes.

K & E STADIA SLIDE RULE

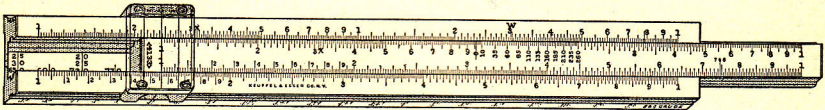


This form of Stadia Slide Rule is remarkable for its simplicity. By one setting of the slide, the horizontal distance and vertical height can be obtained at once when the stadia rod reading and elevation of the telescope are known.

SLIDE RULES FOR MANY PURPOSES.

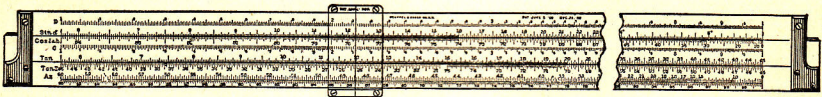
In addition to our extended line of regular Mannheim and Duplex Slide Rules, we manufacture a variety of rules for special purposes, of which we name a few below:

THE ROYLANCE ELECTRICAL SLIDE RULE



This rule is a modification of our regular Slide Rule No. 4035 and can be used for all the calculations made with the ordinary Slide Rule. In addition to the usual scales, it carries a series of scales or gauge marks by means of which the different properties of copper wire, such as size, conductivity, weight, etc., may be determined without the use of tables.

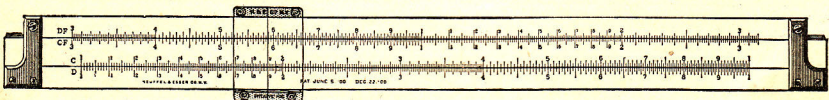
SURVEYOR'S DUPLEX SLIDE RULE



The fact that all astronomical data essential to surveying, such as azimuth, time, latitude, etc., can be ascertained by means of the usual type of Transit with vertical circle but without solar attachment, while generally known, is rather seldom utilized in this country. The main reason for this surprising condition is the difficulty of computing, in the field by spherical trigonometry, the results of the observations.

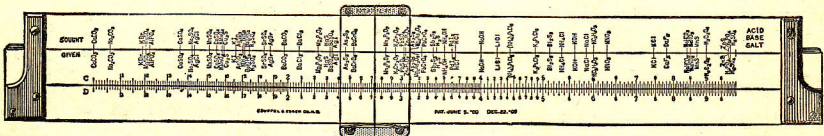
The new K & E Surveyor's Slide Rule entirely eliminates this difficulty by reducing the hitherto complicated calculations to mere mechanical operations, thereby rendering the method of field astronomy with the regular Engineer's Transit extremely simple and practical.

MERCHANT'S (CALCULATING) SLIDE RULE



Especially designed for the merchant, importer, exporter, accountant, manager, mechanic, foreman, etc. By means of it, all manner of problems involving multiplication, division and proportion can be correctly solved without mental strain and in a small fraction of the time required to work them out by the usual "figuring".

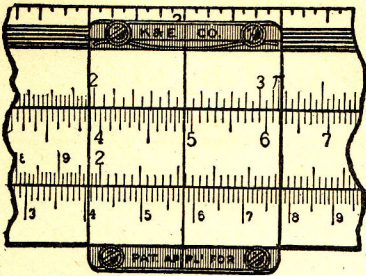
THE CHEMIST'S DUPLEX SLIDE RULE



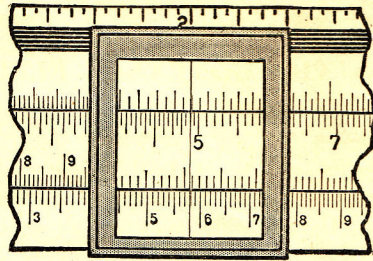
For the rapid solution of problems in Stoichiometry, such as Gravimetric and Volumetric Analysis, Equivalents, Percentage Composition, Conversion Factors and many others.

Write for our Slide Rule Booklet, fully describing the foregoing, as well as all the other Slide Rules made by us.

THE NEW "FRAMELESS" INDICATOR FOR K & E SLIDE RULES.



No. 1 New type Indicator
(Never hides any figures)



No 2. Old type Indicator
(Showing how it hides important figures)

All K & E *adjustable* Slide Rules of the Mannheim and Duplex type are now regularly equipped with the "Frameless" Indicator—an exclusive K & E improvement here described and illustrated.

Every figure on the rule is clearly visible at all times, there being no side pieces to the metal holder of the glass indicator, and, therefore, nothing to hide any of the figures on the rule (see cut No. 1). This is one of the most important improvements in Slide Rules, those indispensable instruments for rapid calculations.

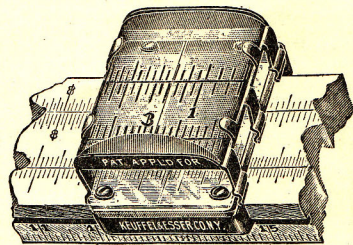
Many times, after setting the old type Indicator or Runner, the user would find that he could not read the result because important figures were hidden by the frame or holder of the glass (see cut No. 2). Frequently two, and sometimes four or even six, eight or nine figures would be thus hidden; causing more or less inconvenience and uncertainty in reading the Slide Rule. The new K & E "Frameless" Indicator (patent applied for) entirely obviates this difficulty.

This significant improvement vastly increases the ease and rapidity of using the Rule. It will be keenly appreciated and enthusiastically welcomed by the thousands of users of K & E Slide Rules.

MAGNIFIER FOR SLIDE RULES.

The K & E Slide Rule Magnifier greatly increases the accuracy with which slide rule results may be read, as the magnification of the graduations enables one to read them easily, and to estimate the spaces with great exactness.

The lens is always in position for reading and is always in focus. The magnification is ample for even the finest graduations, the field covers the full area of the indicator and there is no distortion of the lines. This device is so constructed as to be readily applicable to the indicators of all K & E Slide Rules. It can



be snapped on or off the indicator as desired.

The K & E Magnifier is a high-grade article and should be a part of the equipment of every slide rule user.