|  | A.W. AABBAR | MANUFACTORY OF " "CASTELI" PRECISION |
| :---: | :---: | :---: |
|  | "CASTELL" PE NCIL W ORKS Ltd. <br> ESTABLISHED 1761 STEIN near Nuremberg. | CALCULATING RULES |
|  | London Agency: 13/14 Camomile St., E. C. 3. | BAVARIA |

## A. W. FABER "CASTELC" 四 Precision Calculating Rules.

"CASTELL" PRECISION CALCULATING RULES are the result of many years experience combined with the employment of men of long training; they are unsurpassed for precision and usefulness.

## "CASTELC" Precision Calculating Rules with Celluloid Facings,

embody an arrangement which consists of the placing of metal strips edgeways in the stock and in the slide. These hold the rule quite straight lengthways; moreover, should the rule become bent by some unusual cause, they permit it to be straightened to the original position; thus enabling a complete agreement between stock and slide to be always maintained.

Further, in order to give

## Full Guarantee

for a regular and even movement of the slide, essential to a rapid and accurate working of the rule, A.W. FABER " , ASTEL["區 PRECISION CALCULATING RULES are now provided with

## Spring Steel Base.



Patent No. 10753.

A slit extends throughout the whole length of the rule, and the two sides of the stock being united by spring steel plates, have a closing action on the slide. Therefore the possibility of warping, due to atmospheric changes, is reduced, and under ordinary conditions the satisfactory working of the rule ensured.

All Celluloid scales have mathematically exact engraved hair line divisions, and are prevented from being displaced by taper wooden pegs.


Upon request, our Slide Rules will be fitted with

## Adjusting Screws (patented)

which give them highest perfection.
The longitudinal slit which divides the body of the calculating rule into two halves is crossed by thin bands of steel, which are only held fast in one half of the body, while in the other half they can be displaced by means of screws, which are placed in this part of the body in such a way that they can be turned but not shifted, and work in guide cylinders formed as nuts.

By this arrangement, a smooth even movement of the slide is attained in the body of the rule, independently of any changes of shape in the body of the rule brought about by changes in the weather or similar causes.

Should any adjustment of the side wings become necessary, the screws are slackened or tightened, beginning at one end, one after the other, a little at a time, so that the part controlled by individual screws does not undergo too great a displacement either inwards or outwards.

For operating these screws a small screw-driver is provided with each rule.
Treatment of Slide Rules. Slide rules should be kept in a dry (not warm) place and in particular they should be protected from damp and the sun's rays. When used in a very damp atmosphere, or if the slide should move too stiffly, it is advisable to apply vaseline to the slide and its guides. It is advisable to repeat this treatment from time to time.

Slide rules that have become dirty should be cleaned with a soft rag moistened with petrol. Treatment of slide rules with liquids which dissolve celluloid, as spirits of wine, is to be avoided.

INSTRUCTIONS. Brief instructions are supplied free with every rule, but, for full study, the Book of Instructions, issued in all principal languages and containing numerous examples, is recommended. It is indispensible to students, but valuable also to those already conversant with the use of the calculating rule.

# A. W. FABER 圈"CASTELL"圖 Precision Calculating Rules. 

Standard Pattern.


No. 360 (Reduced size).
No. 360 "CASTELL" PRECISION CALCULATING RULE, 10 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. On the upper face of the rule are the two usual logarithmic scales for multiplication and division, squaring and cubing, and the extraction of square and cube roots. On the under side of the slide are the sine and tangent scales, SS and TT, for carrying out trigonometrical calculations, and the logarithmic scale LL, by means of which higher powers and roots can easily be determined.

This is a very important rule, which is of great service for technical and commercial calculations. It appeals to the Architect, the Constructional Engineer, the Mechanical Engineer, the Electrical Engineer, the Physicist and the Chemist.
No. 380 "CASTELL" PRECISION CALCULATING RULE, 193 in. scale length, with white celluloid surface, with adjusting screws and three line cursor. Similar to rule No. 360 in arrangement.
No. 369 "CASTELL" PRECISION CALCULATING RULE, Pocket Size, 5 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rule No. 360 in arrangement.
No. 389 "CASTELL" PRECISION CALCULATING RULE, Pocket Size 4 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rules Nos. 360 and 369 in arrangement.

## Students' Rule.



No. 361 (Reduced size).
No. 361 "CASTELL" PRECISION CALCULATING RULE, 10 in. scale length, with white"celluloid surface and ORDINARY aluminium cursor with glass. On the face of the rule are the two usual logarithmic scales with decimal figuring $1,1 \cdot 1,1 \cdot 2,1.3 \ldots \ldots$ for multiplication and division, squaring and cubing, together with the extraction of square and cube roots.

On the upper bevelled edge is a centimeter scale and at the bottom an inch scale. This rule is specially suitable for use in intermediate and technical schools.

When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule.

# A. W. FABER "LASTELL"圑 Precision Calculating Rules. 

## with a table of the most important constants and brief instructions.



No. 363 (Reduced size).
No. 363 "CASTELL" PRECISION CALCULATING RULE, 10 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rule No. 360 in arrangement, but with decimal figuring $1,1.1,1.2,1 \cdot 3$


No. 367 (Reduced size).
No. 367 "CASTELE" PRECISION CALCULATING RULE, 10 in . scale length, with white celluloid surface and DIGIT REGISTERING aluminium cursor with glass. Similar to rule No. 360 in arrangement, but with indication marks on the stock.


No. 376 (Reduced size).
No. 376 "CASTELL" PRECISION CALCULATING RULE, 10 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rule No. 360, but provided with a reciprocal scale in the centre of the upper side of the slide and a scale for cubes on one edge.
No. 390 "CASTELL" PRECISION CALCULATING RULE, Pocket Size, 5 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rule No. 376 in arrangement.

When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule.

# A. W. FABER " Precision Calculating Rules. 

## Each rule in a cardboard case

with a table of the most important constants and brief instructions.



No. 345 (Reduced size).

No. 345 "CASTELL" PRECISION CALCULATING RULE, SYSTEM HOHENNER, 10 in . scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rule No. 360, but provided with a scale, in red, on the upper side of the rule for the calculation of barometrically-measured altitude differences.

Owing to the very simple method of calculation, this special slide rule will be much appreciated by SURVEYORS AND CIVIL ENGINEERS.

No increase in price is made for the extra scale.
No. 349 "CASTELL" PRECISION CALCULATING RULE, 5 in. scale length (Pocket Size). Similar to rule No. 345 in arrangement.

No. 346 " $C A S T E L[$ " PRECISION CALCULATING RULE, 10 in. scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. Similar to rule No. 360, but with a scale for cubes on one edge and System Hohenner (as Rule No. 345).

When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule,

# A．W．FABER＂圈＂CASTELL＂國 Precision Calculating Rules 

## SYSTEM RIETZ．

Each rule in a cardboard case
with a table of the most important constants and brief instructions．


No． 375 （Reduced size）．
No． 375 ＂CASTELL＂PRECISION CALCULATING RULE，SYSTEM RIETZ， 10 in．scale length， with usual log．divisions as on rule 360，but a little wider，in order to add on the face special log．scales for cubes and logarithms．This simplifies the reading of logarithms，cubes， cubic roots；therefore this rule is in general use in all technical institutes and offices．
No． 385 ＂CASTELE＂PRECISION CALCULATING RULE，SYSTEM RIETZ，19永 in．scale length， with adjusting screws and three line cursor．Similar to rule No． 375 in arrangement．
No． 386 ＂$C A S T E L["$ PRECISION CALCULATING RULE，SYSTEM RIETZ，Pocket Size， 5 in． scale length．Similar to rule No． 375 in arrangement．


No． 387 （Reduced size）．
No． 387 ＂CASTELL＂PRECISION CALCULATING RULE，SYSTEM RIETZ，with Reciprocal Scale， 10 in ．scale length，with white celluloid surface and ORDINARY aluminium cursor with 3 －line glass．Similar to rule No．375，but provided with a reciprocal scale in the centre of the face of the rule．

No． 397 ＂CASTELL＂PRECISION CALCULATING RULE，SYSTEM RIETZ，with Reciprocal Scale，Pocket Size， 5 in．scale length．Similar to rule No． 387 in arrangement．

When ordering cursors，the exact width of the surface of the rule should always be given in addition to the number of the rule．

# A．W．FABER 橉＂CASTELL＂國 Precision Calculating Rules． 

Each rule in a cardboard case<br>with a table of the most important constants and brief instructions．

## System Rietz with Log－Log and Reciprocal Scales．



No． 392 （Reduced Size）．
No． 392 ＂CASTELL＂PRECISION CALCULATING RULE，11年 in．long，with white celluloid surface and ORDINARY aluminium cursor with 3 －line glass．

This rule has，in addition to all the scales of our No． 360 Standard Reile，a Log－Log Scale，a Reciprocal Scale and a Cube Scale，whilst all the scales are now extended beyond the indices．
No． 382 ＂CASTELL＂PRECISION CALCULATING RULE，193 in．scale length，with adjusting screws and three line cursor．Similar to rule No． 392 in arrangement．

Rule for Electrical and Mechanical Engineers．with LOG－LOG Scale．


No． 378 （Reduced size）．
No． 378 ＂CASTELL＂PRECISION CALCULATING RULE， 10 in ．scale length，with white cellu－ loid surface and ORDINARY aluminium cursor with 3 －line glass．In addition to the same scales as on rule No．360，this carries three other logarithmic scales，
1．by means of which powers and roots of the form $a^{x}$ and $\sqrt[x]{a}$ can be calculated，where $a$ and $x$ may be fractional．The length of the rule imposes a limit to the scale，and having regard to the most usual values required，it is arranged in such a way that $a$ is between 1.1 and $100000, x$ between 0.1 and 10 ，but the result may be found also in nearly all other cases．Owing to the provision of new power scales，powers of $e$ and natural logarithms are to be read by simply setting the cursor．

When ordering cursors，the exact width of the surface of the rule should always be given in addition to the number of the rule．
2. Further, the efficiency of a dynamo or motor can be determined by a single setting of the slide, while
3. the cross section of an electrical copper conductor for continuous or alternating current, free from induction, can be obtained by two settings of the slide, the other necessary data being given.

This special slide rule, introduced by us for ELECTRICAL AND MECHANICAL ENGINEERS, has been very extensively adopted in professional circles owing to its practical utility and simplicity of operation. It is an indispensable aid not only to the Special Engineer, but also to the Manufacturer and Works Manager.

No. 388 "CASTELL" PRECISIONS CALCULATING RULE, 19? in. scale length, with white celluloid surface with adjusting screws and three line cursor. Similar to rule No. 378 in arrangement.

No. 379 "CASTELL", PRECISION CALCULATING RULE, Pocket Size, 5 in. scale length, with white celluloid surface and three line cursor. Similar to rule No. 378 in arrangement.

## Improved Electrical Engineers' Rule.



No. 398 (Reduced Size).

No. 398 "CASTELE" PRECISION CALCULATING RULE, $11 \frac{1}{2}$ in. long, with white celluloid surface and ORDINARY aluminium cursor with 3 -line glass.

This slide rule has, in addition to all the scales of our No. 378 Log-Log Rule, a Reciprocal Scale and a Cube Scale, whilst all the scales are now extended beyond the indices.

No. 319 "CASTEL[" PRECISION CALCULATING RULE, Pocket Size, $6 \frac{1}{\frac{1}{8}}$ in. long, with white celluloid surface "and ORDINARY aluminium cursor with 3 -line glass. Similar to rule No. 398 in arrangement.

When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule.

# A. W. FABER "䀢"CASTELL"國 Precision Calculating Rules. 



No. 358 (Reduced Size).
No. 358 "CASTELL" PRECISION CALCULATING RULE, 10 in . scale length, with white celluloid surface and ORDINARY aluminium cursor with glass. This rule serves for determining the density of grains and spikelets of ears in different kinds of cereals. In addition to the above, any desired multiplication or division can be carried out by the rule with great facility and rapidity.

## For Business Men.



No. 342 (Reduced Size).
No. 342 "CASTELL" "PRECISION CALCULATING RULE "COLUMBUS", SYSTEM ROHRBERG, for Business Men, 15 in . long, with white celluloid surface, fitted with adjusting screws and special four line cursor. With instruction book specially written for this rule.

The following calculations can be worked on the "Columbus" slide rule: Multiplication Percentage increases Interest calculations Poreign Exchanges Combined multiplication Statistics Division and deductions (rates per cent. for Arbitrage and division

Poreign weights and measures.

## For Commercial Students.

No. 307 A.W. FABER PRECISION CALCULATING RULE "COLUMBUS MINOR", SYSTEM ROHRBERG, 12 in. long, with white celluloid surface and celluloid cursor.

[^0]
# A. W. FABER School Slide Rule. 



No. 339 (Reduced size).
No. 339 SCHOOL SLIDE RULE, 10 in . scale length, with celluloid surface and celluloid cursor, suitable for elementary students. The scales are in every respect as accurate as on our ORDINARY technical slide rules. The seldom used trigonometrical divisions are omitted, but problems involving multiplication, division, squares, cubes, square roots, cube roots can be worked as correctly and as easily as on the standard rules.

This rule has no Spring Steel Base.
No. 332 SCHOOL SLIDE RULE, Pocket Size, 5 in. scale length, with celluloid surface and celluloid cursor. Similar to rule No. 339 in arrangement.

## A. W. FABER "CASTELE" 國 Precision Calculating Rules.

## Slide Rules for advertisements.

(These Rules can be supplied with special imprint and for this reason are specially suitable for advertising purposes.)


No. 396
No. 396 "CASTELL" PRECISION CALCULATING RULE, flat, 5 in. scale length, $\frac{5}{16}$ in. thick, with white celluloid surface and ORDINARY aluminium cursor with glass. The back of this rule is also faced with celluloid and serves for advertisements.
No. 338

No. 316
"CASTELE" PRECISION CALCULATING RULE, flat, 5 in. scale length, ${ }^{\frac{1}{15}} 1$ similar to rule No. 396 in arrangement.
"CASTELL"PRECISION CALCULATING RULES, flat, with white celluloid surface and ORDINARY aluminium cursor with glass. The back of these rules is also faced with celluloid and serves for advertisements,
similar to rule No. 396 in arrangement, but $4 \frac{3}{4}$ in. long


When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule.

## A. W. FABER 圈"CASTEL["凅 Large Calculating Rules for DEMONSTRATION Purposes.


$\left.\begin{array}{rl}\text { Rule No. 336, } 49^{\frac{3}{4}} \text { in. long, scale length } 39^{\frac{1}{2}} \text { in. } \\ ", ~ " 337, ~ & 99^{\frac{1}{2}}, ", ", ~\end{array}\right\}$ available in arrangement similar to Rules:
No. 360, Standard Pattern
, 375, Rietz "
" 342, Commercial ",


These Extra Large Rules have been prepared for the purpose of assisting teachers in colleges and technical schools to explain the details and working of the Calculating Rule to their pupils, the scales and figures being sufficiently large to be read at a distance by the whole class.

Though being four or nine times the size of the Rules of regular length, No. 360, \&c., all the positions on either Rule, whether long or short, are in exact proportion to each other. This enables A. W. FABER'S Instruction Book to be used also for these Demonstration Rules.

The Cursor consists of a wooden frame with wire line, and travels in a groove along the upper edge of the Rule. It is easily moved forward and backward.

The Rules are made of well-seasoned wood, painted in white, with black divisions and figures.
They are provided with 2 eyelets to hang them.
Rules 336 and 337 can, on the reverse side, be adjusted by screws to enable a correct regulation of the movement of the slide.
A. W. FABER "CASTEL[" PENCIL WORKS Ltd., estabished 1761 STEIN near Nuremberg.

# A. W. FABER "CASTELE"凅 Cursors. 



## Magnifying Cursors No. 2.

with semi-cylindrical len and 1 line.
with moveable semi-cylindrical lens and 3 lines. Framed.

Frameless.


CURSORS (with or without frame, with 1 or 3 lines, with semi-cylindrical lens or ordinary) for all "CA.STELL" Precision Calculating Rules.
DIGIT REGISTERING CURSORS (illustrated on page 3) for all "CASTELC" Precision Calculating Rules.
CURSOR GLASSES with 1 or 3 lines.
CElluloid CURSORS for School Slide Rules.


## Magnifying Cursors No. 1.

They are the BEST on account of their Strong and Accurate Construction
The Magnifier is formed of 2 polished peris-. copic lenses, by which the best possible reading is obtained. A further obvious advantage lies in the fact that as the lens holder is supported at one side only, any shadowing of the scale is avoided. The Magnifier being arranged to turn under the rule, the reading of the scales on the under side of the slide can also be rapidly obtained with the correct focus.

When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule.

## A. W. FA BE R'S Flat Rulers or Straight Edges. MARKED IN INCHES OR CENTIMETERS.



Reduced size.


Sectional view Actual size.
In Boxes of 1 dozen.


## Flat Rulers or Scales

WITH METAL EDGES. Stamped in Gold: A. W. FABER


In Boxes of 1 dozen.

| No. 2693 | DOUBLE BEVELLED SCALE, without metal button, natural polished | 30 | 12 |
| :---: | :---: | :---: | :---: | :---: |
| This Scale is marked on one bevel in inches, divided as under: | ond |  |  |
| First four inches | Second four inches | Third four inches |  |




These scales are marked on one bevel in $\frac{1}{16}$ inches on the other in $\frac{1}{1} \mathrm{~mm}$.

## A. W. FABER'S Triangular Scales.

 ONE SIDE DIVIDED INTO INCHES, THE OTHER INTO CENTIMETERS.


No. 872 REDUCTION SCALE, with concave faces, boxwood, natural polished, triangular, with 6 divisions $1: 1000,1: 2000,1: 2500,1: 500,1: 1250,1: 1500$
do.

## A. W. FABER'S <br> Highly Finished Celluloid Edged Scales.


No. 2742C/A "ARMSTRONG" SCALE, boxwood, celluloid edges . . . . . 6
2743C/A
12
" ${ }^{\prime \prime} 2745 \mathrm{C} / \mathrm{A}$


Also with "ENGINEERS" and "DRAUGHTSMAN" divisions.

# A. W. FABER "CASTELC" 

## 

No. 9000.

No. 9000 "CASTELE" PENCIL, hexagon, green polished, stamped in gold

```
16 Degrees: 6B, 5B, 4B, 3B, 2B, B . . . . . . (soft)
HB, F . . . . . . . . . . . . . . (medium)
H, 2H, 3H,4H,5H,6H,7H,8H . . . (hard)
```


## 9022 GO AW FABER Giv CASTEECH FWM : HB

No. 9022.

No. 9022 "CASTELL" ARTISTS' PENCIL, hexagon, green polished, stamped in gold, with white hexagon celluloid end and improved metal point

```
16 Degrees: 6B, 5 B, 4B, 3 B, 2 B, B . . . . . . . (soft)
HB, F . . . . . . . . . . . . . . (medium)
H, 2H, 3H, 4H, 5H, 6H, 7H, 8H . . . (hard)
```

The No. 9022 "CASTELL" ARTISTS' PENCIL has the advantage that the lead can neither break nor slip back, and the metal point is prevented from becoming detached by the outer metal flange. These are most important points for draughtsmen and deserve particular attention.

No. 9030 "CASTELᄃ" LEADS, $5^{\frac{1}{8}}$ in., for No. 9022, 6B to $8 \mathrm{H}, 6$ in a flat cardboard box.


No. 9100.


## A. W. FABER "CASTELC"



No. 9110 "CASTELL" COPYING INK PENCIL, hard, violet, round, green polished, stamped in gold

| , $91101 / 2$ | " | " | " | " | medium | " | " | " | " | " | " |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| " 9111 | " | " | " | " | soft, | " | " | " | " | " | " |
| " 9606 | " | " | " | " | soft, black | " | " | " | " | " | " |
| " 9607 | " | " | " | " | hard, | " | " | " | " | " | " |
| ${ }^{\prime} 9608$ | " | " | " | " | red and blue | " | " | " | " | " | " |
| ${ }^{\prime} 9609$ | " | " | " | " | red, | " | " | " | " | " | " |
| " 9610 | " | " | " | " | blue, | " | " | " | " | " | " |
| " 9611 | " | " | " | " | green, | " | " | " | " | " | " |
| , 9612 | " | " | " | " | yellow, | " | " | " | " | " | " |
| " 9613 | " | " | " | " | carmine, | " | " | " | " | " | " |
| , 9614 | " | " | " | " | orange, | " |  | " | " | " |  |
| " 9615 | " | " | " | " | brown, |  |  |  |  | " | " |
| " 9616 | " | " |  | " | new blue, |  | " | " | " | " | " |

## A. W. FABER "CASTELK" <br> Polychromos Coloured Pencils. In 64 different Shades.

## 

No. 9201.
No. 9201 "CASTELL" POLYCHROMOS COLOURED PENCILS, round, polished same colours as the chalks, stamped in gold, in 64 different colours.
No. 9227 Box with 12 "CASTEL[" Polychromos Pencils, 4 it in. long, pointed, ass. colours for Engineers

| $"$ | 9229 | $"$ | 12 | $"$ | $"$ | $"$ | $4!$ | $"$ | $"$ | $"$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $"$ | 9234 | $"$ | $"$ | 12 | $"$ | $"$ | $"$ | 4 | $"$ | $"$ |
| $"$ | $"$ | $"$ | $"$ | $"$ Alectical Bngineers |  |  |  |  |  |  |

## A. W. FABER "CASTELL" 㽣 Office Coloured Pencils.

## © A.W PABER FHPM ASTECEM ETA * 9530

No. 9530.
No. 9530 "CASTELE" OFFICE COLOURED PENCIL, red, hexagon, red polished, stamped in gold

| 9531 | $"$ | $"$ | $"$ | $"$ | blue, | $"$ | blue |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 9532 | $"$ | $"$ | $"$ | $"$ | green, | $"$ | green |
| 9533 | $"$ | $"$ | $"$ | $"$ | yellow, | $"$ | yellow |
| 9534 | $"$ | $"$ | $"$ | $"$ | brown, | $"$ | brown |
| 9535 | $"$ | $"$ | $"$ | $"$ | black, | $"$ | black |
| 9536 | $"$ | $"$ | $"$ | $"$ | carmine, | $"$ | carmine |
| 9537 | $"$ | $"$ | $"$ | $"$ | red and blue, | $"$ | red and blue |


| " | " |
| :---: | :---: |
| " | " ${ }^{\prime \prime}$ |
| " | " " |
| " | " " |
| " | " " |
| " | " |
| " | " |


[^0]:    When ordering cursors, the exact width of the surface of the rule should always be given in addition to the number of the rule.

