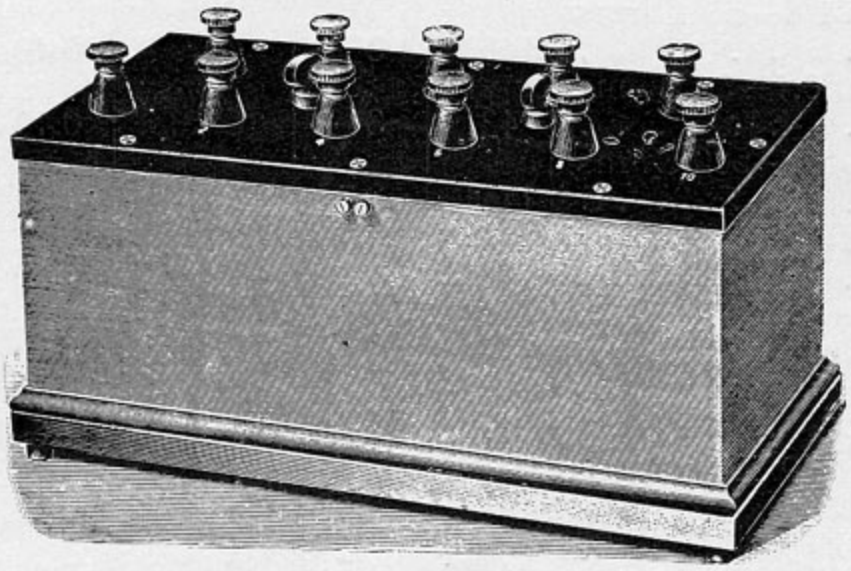
# The Scientific Shop

ALBERT B. PORTER

Scientific Instruments 324 Dearborn St., CHICAGO

CIRCULAR 333 JANUARY 1907

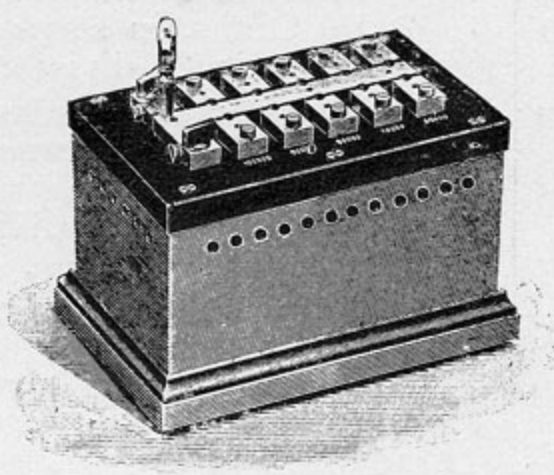
## Siemens & Halske A.-G.'s Precision Resistances



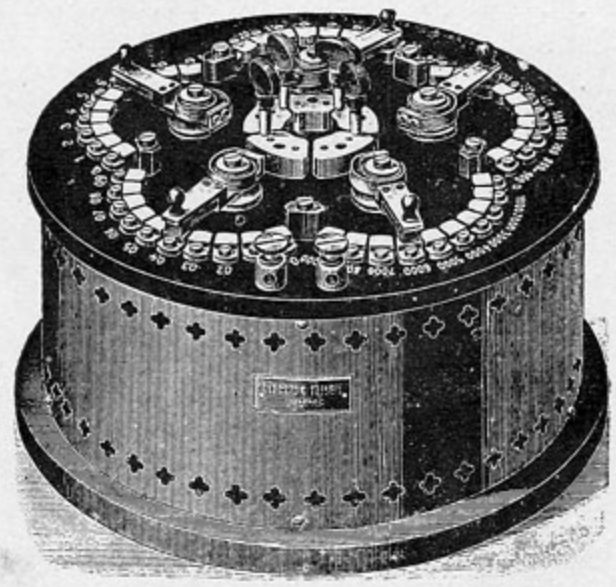
31420
**Resistance of 10 Megohms 6775a**

31421
**Bridge shunt resistance 6998**

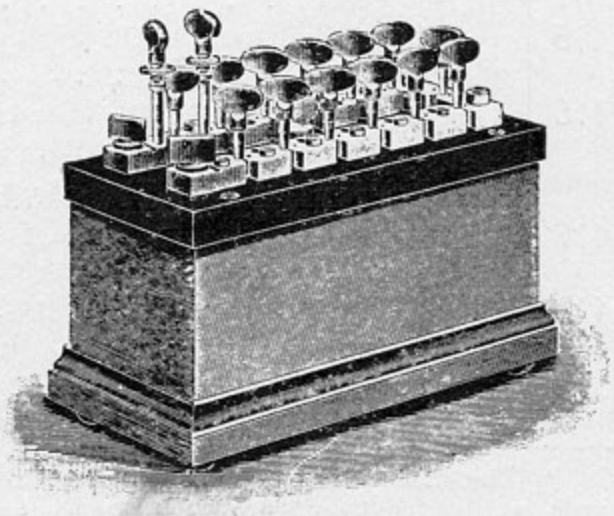
31419
**Resistance of 1 Megohm 6775**



31413
**Decade resistance of 100 Ohms 4570**



31422
**Switch resistance of 160000 Ohms 6901**



31403
**Plug resistance of 1000 Ohms 444**

| Cat. No. | Article | Drawing No. | Net Weight Kilos | Price $ | Packing $ |
|---|---|---|---|---|---|
| | **Plug Resistances:** [1] | | | | |
| | **connected in series,** with plug and travelling terminal | | | | |
| 31400 | 100 Ohms, in steps of 1—50 Ohms in 9 divisions . . . . . | 1452 | 3 | **48.00** | 0.40 |
| 31401 | 100 Ohms, in steps of 0,1—50 Ohms in 13 divisions . . . . . | 431 | 3 | **60.00** | 0.40 |
| 31402 | 1000 Ohms, in steps of 1—500 Ohms in 13 divisions . . . . . | 1431 | 3,7 | **62.00** | 0.50 |
| 31403 | 1000 Ohms, in steps of 0,1—500 Ohms in 17 divisions . . . . . | 444 | 4,1 | **78.00** | 0 50 |
| 31404 | 2000 Ohms, in steps of 0,1—1000 Ohms in 19 divisions . . . . . | 6917 | 4,5 | **90.00** | 0.50 |
| 31405 | 5000 Ohms, in steps of 1—2000 Ohms in 15 divisions . . . . . | 443 | 4.3 | **78.00** | 0.60 |
| 31406 | 5000 Ohms, in steps of 0,1 - 2000 Ohms in 19 divisions . . . . . | 449 | 4,3 | **94.00** | 0.60 |
| 31407 | 10000 Ohms, in steps of 1—5000 Ohms in 17 divisions . . . . . | 433I | 4 5 | **84.00** | 0.60 |
| 31408 | 10000 Ohms, in steps of 0,1—5000 Ohms in 21 divisions . . . . . | 446 | 4 6 | **94.00** | 0.60 |
| 31409 | 20000 Ohms, in steps of 0,1—10000 Ohms in 23 divisions . . . . . | 446a | 4,7 | **108.00** | 0.60 |
| 31410 | **connected in series, according to Kohlrausch** [2], of 20000 Ohms, in steps of 0,1 up to 10000 Ohms, in 22 divisions, with 5 interrupting plugs. . . . . | 6999a | 5 | **120.00** | 0.80 |
| | **connected in decade** (owing to the small and constant resistance of one single large plug these resistances are especially adapted for accurate work) | | | | |
| 31411 | 1 Ohm in 10 steps of 0,1 Ohm each | 4570 | 3 | **48.00** | 0.40 |
| 31412 | 10 Ohms in 10 steps of 1 Ohm each | 4570 | 3 | **46.00** | 0.40 |
| 31413 | 100 Ohms in 10 steps of 10 Ohms each . . . . . | 4570 | 3 | **46.00** | 0.40 |
| 31414 | 1000 Ohms in 10 steps of 100 Ohms each . . . . . | 4570 | 3 | **47.25** | 0.40 |
| 31415 | 10000 Ohms in 10 steps of 1000 Ohms each . . . . . | 4570 | 3 | **54.00** | 0.40 |
| 31416 | 100000 Ohms in 10 steps of 10000 Ohms each . . . . . | 4570 | 3,2 | **76.00** | 0 40 |
| | **Comparison Resistances:** | | | | |
| 31417 | 100000 Ohms, without subdivision for 150 Volts . . . . . | 2434a | 0,9 | **18.00** | 0.20 |
| 31418 | 100000 Ohms, in 2 steps, with plugs of 50000 Ohms each. Each division for 75 Volts . . . . . | 2433 | 0,8 | **18.80** | 0.20 |

[1] The different resistances of normal make are bifilarly wound, but the steps of 100 Ohms upwards of all resistances can also be supplied without capacity according to Chaperon, at an additional cost of 20%, with the exception of Cat. Nos. 31417—31420.

[2] See treatise of the Physikalisch-Technische Reichsanstalt, 1899/1900, Vol. III, page 164.

| Cat. No. | Article | Drawing No. | Net Weight Kilos | Price $ | Packing $ |
|---|---|---|---|---|---|
| | **Resistance with sectional Terminals** | | | | |
| 31419 | **1 Million Ohms** in sections of 100000 Ohms each. Each division will stand 100 Volts and is fitted with 4 bifilarly wound coils . . . . . | 6775 | 3,5 | **80.00** | 0.40 |
| 31420 | **10 Million Ohms** in sections of 1 Million Ohms each; each division will stand 500 Volts and is fitted with 40 bifilarly wound coils . . . . . | 6775a | 2,5 | **400.00** | 1.50 |
| 31421 | **Bridge Shunt Resistance** [1] **with interchangeable Branches,** containing 2 branches of 1, 10, 100, 1000 Ohms each, which can be connected with any of the other branch resistances at will . . | 6998 | **3** | **60.00** | 0.20 |

## Switch Resistance

with accurate adjustment and terminals for each section.

| Cat. No. | Total Resistance Ohms | Drawing No. | Steps for the Cranks Ohms | Steps for the Plugs Ohms | Net Weight Kilos | Price $ | Packing $ |
|---|---|---|---|---|---|---|---|
| 31422 | 160000 | 6901 | 9×0,1; 1; 10; 100; 1000 | {10000; 20000 / 40000; 80000} | 9 5 | **176.00** | 1.00 |
| 31423 | 10000 | 6901a | 9×0,1; 1; 10; 100; 1000 | — | 7,5 | **156.00** | 1.00 |
| 31424 | 10000 | 6901c | 9×1; 10; 100; 1000 | — | 7 5 | **186.00** | 1.00 |
| 31425 | 1000 | 6901b | 9×0,1; 1; 10; 100 | — | 7,5 | **135.00** | 1.00 |
| 31426 | 1000 | 6901c | 9×1; 10; 100 | — | 6 | **112.00** | 1.00 |

[1]) The different resistances of normal make are bifilarly wound, but the steps of 100 Ohms upwards of all resistances can also be supplied without capacity according to Chaperon, at an additional cost of 20%.

## The Rowe Harmonic Analyser

This is a simple, compact, and easily operated instrument for rapidly and accurately determining the relative amplitudes and phase relations of the harmonic components into which any periodic curve or oscillogram can be resolved. It is applicable to any wave length without the necessity of enlarging or otherwise changing the wave to be analysed. An early form of the instrument was described in the Electrical World of March 1905; recent improvements have greatly increased its value.

Send for special descriptive circular.

C 288

## The "Little Jack" Independent Levelling Screws

These "Little Jacks" are convenient in the laboratory for quickly setting up a levelling table of any required size or shape, or for providing any piece of apparatus with temporary levelling screws. The "Little Jack" consists of a bell-shaped brass casting with three feet, fitted at the top with a screw having a milled flange. The "Little Jack" is about three inches high when screwed down, a convenient height for admitting the fingers underneath the levelling table to operate the screw.

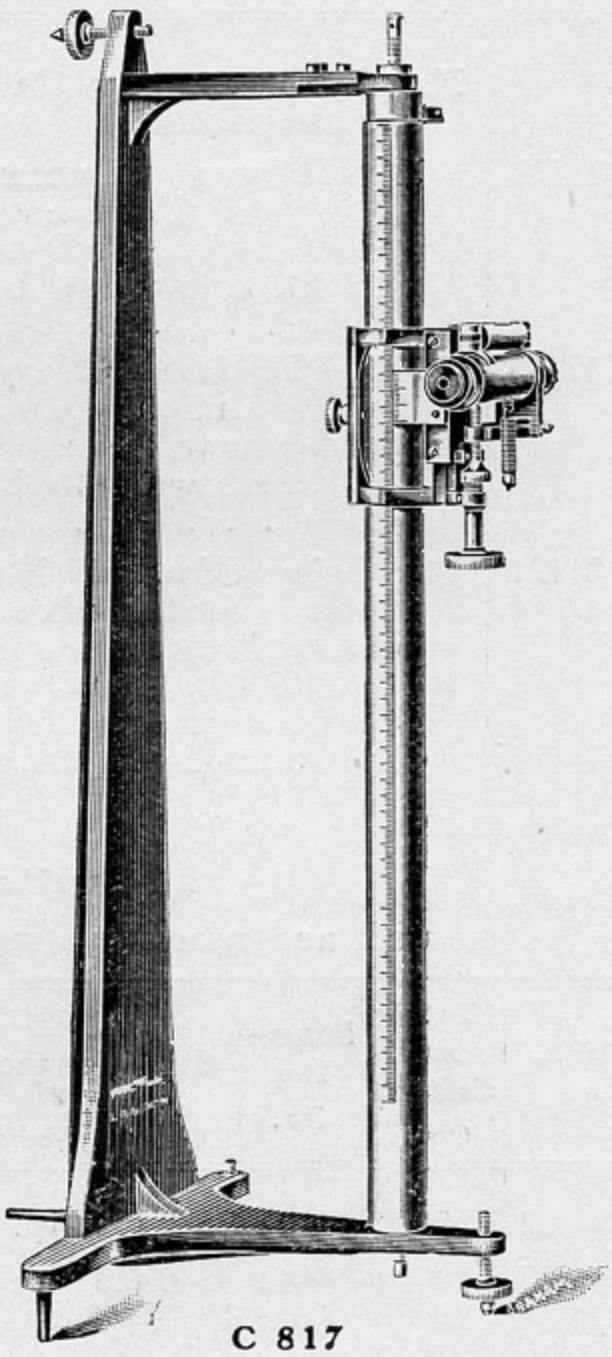
**C 287 "Little Jacks"** with ¼ inch screw, per set of three, from stock.. **$1.75**

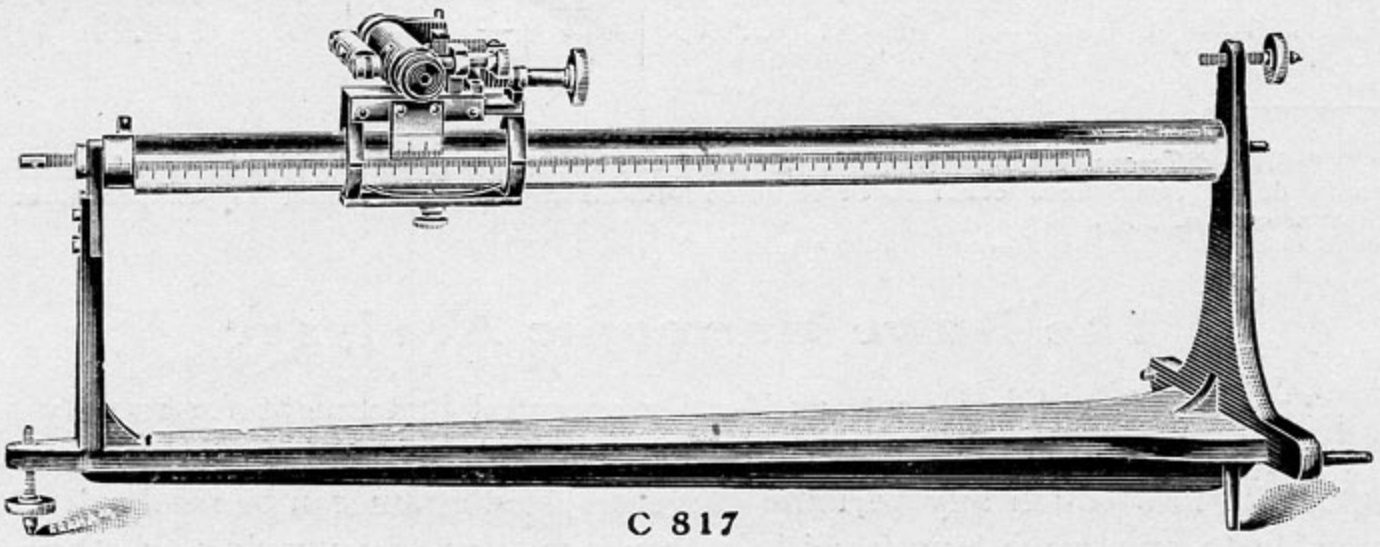
**C 288 Same,** with ⅜ inch screw, per set of three, from stock..... . **2.00**

## The "Studentia" Cathetometer

This cathetometer is especially designed for the use of students. It is strongly made and is not easily deranged.

It consists of a stout brass bar, cylindrical in section and straight, which swings between two hardened steel centres, and can be clamped in any position in azimuth. A millimetre scale runs almost the entire length of the bar. A carriage slides along the bar and is provided with a feather-way, spring, and clamp. One face of the carriage is formed into a dovetailed slide, along which the telescope can be moved by means of a micrometer screw. The position of the telescope is read by means of a vernier attached to the telescope support. The telescope has a focal length of about seven inches, and a clear aperture of 15-16 inch, and is provided with a level and cross-wires. It can be adjusted horizontally, and can be focused from infinity to within three feet. The construction of the stand is such that the instrument can be used either vertically as a cathetometer, or horizontally as a comparator.


C 817


C 817

**C 817 Studentia Cathetometer** with 50cm. range, reading to 0.02mm. Duty-free..... **$47.50**

**C 818 Same,** 1 metre range, reading to 0.02mm. Duty-free..... **65.00**

**C 819 Same,** 50cm. range, reading to 0.01mm. Duty-free..... **52.50**

**C 820 Same,** 1 metre range, reading to 0.01mm. Duty-free..... **75.00**