

The Scientific Shop

ALBERT B. PORTER

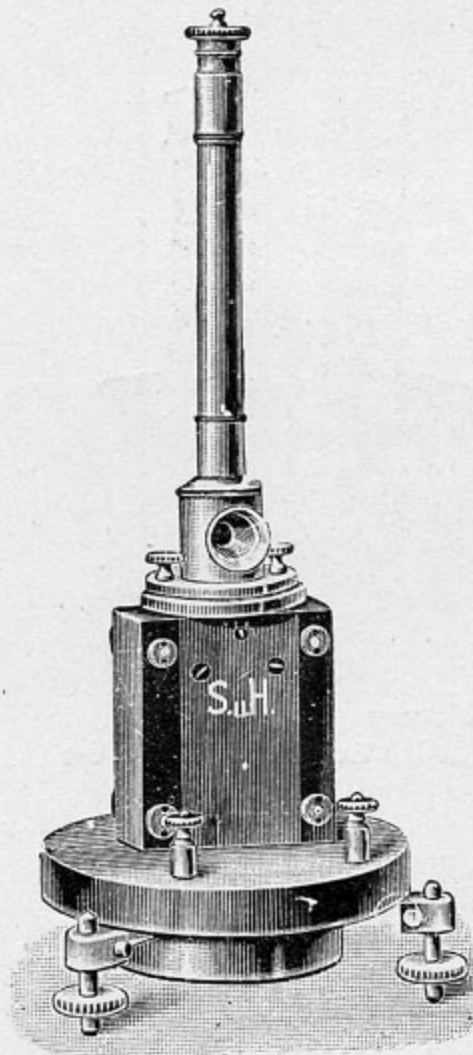
Scientific Instruments

324 Dearborn St., CHICAGO

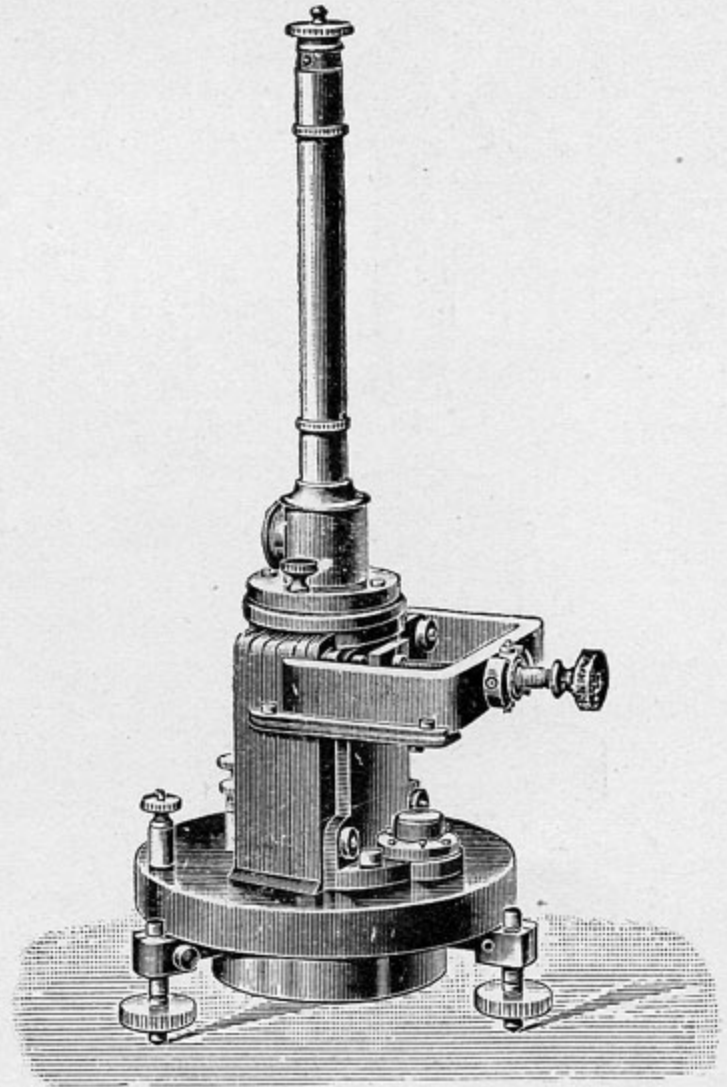
CIRCULAR 336

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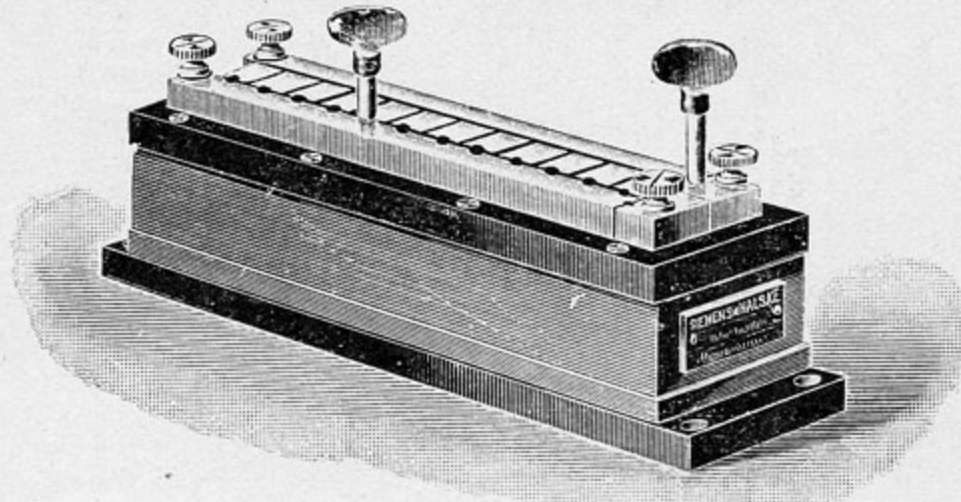
Siemens & Halske A.-G.'s Galvanometers, Deprez-d'Arsonval System



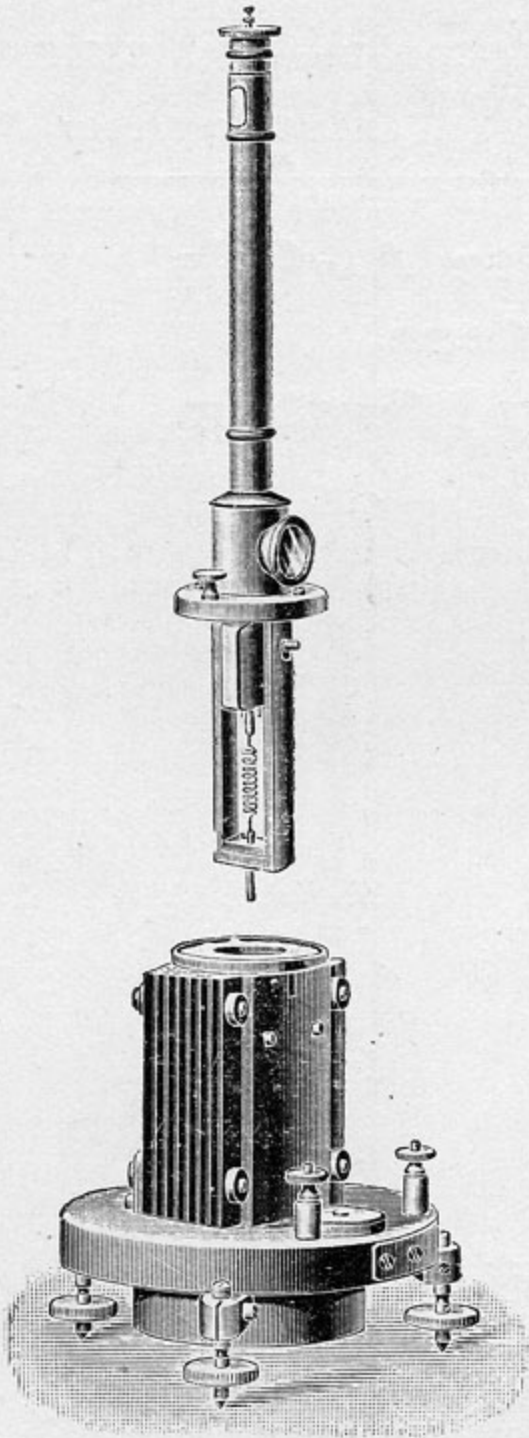
31502
Mirror galvanometer 6406



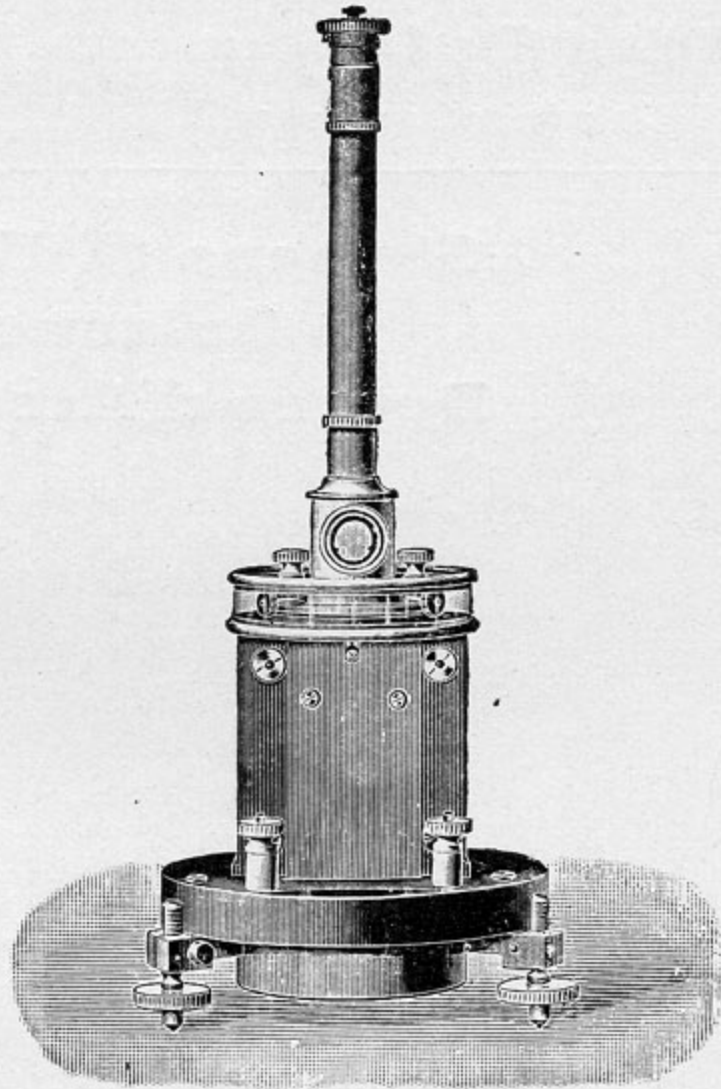
31504 with 31512
Mirror galvanometer 6406 c
with adjustable magnetic shunt 6406 VII



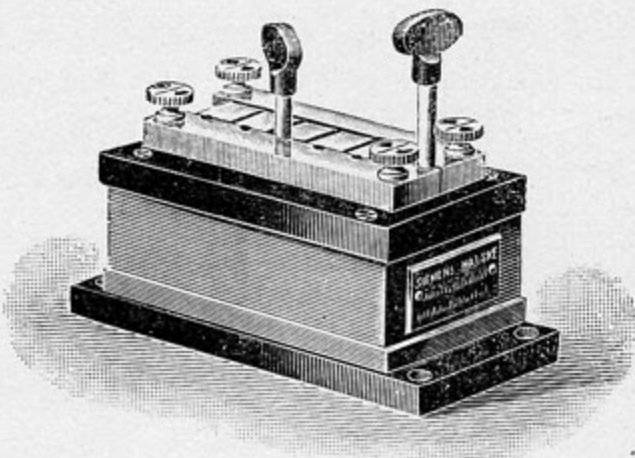
31511
Shunt 6406 III b



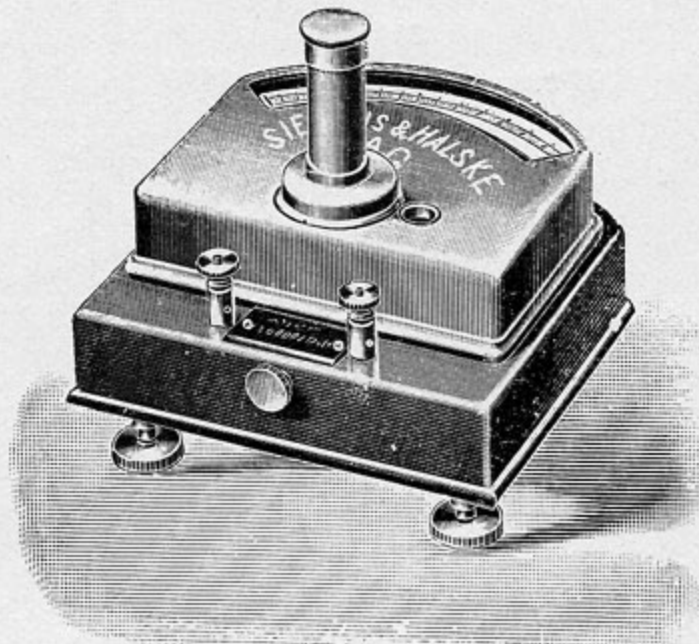
31503
 Mirror galvanometer 6406 b
 with System removed



31507
 Mirror galvanometer
 for ballistic purposes 6406 e



31510
 Shunt 6406 III a



31517
 Pointer galvanometer 6396 c

Mirror Galvanometers Deprez - d'Arsonval System for short and long oscillations (ballistic measurements)

For demonstration purposes, these instruments are also supplied with large opening and plane mirror of 20 mm Diameter. Prices on application.

The instruments are given different sensibilities by use of different suspended systems, as mentioned below. The base can be fitted with 2 systems¹⁾. The instruments are provided with 3 terminals, so that the moving system can be used either separately or with a resistance. The latter is so arranged as to provide a good damping for quick measurements in case of a short-circuit between the two terminals. Each type of instrument can be arranged for ballistic purposes, at an additional cost of \$ 24.00, as in the case of Cat. No. 31507. The moving parts of the instruments are provided with detachable weights, so that the duration of the oscillation can be varied between 20 seconds and 1 minute.

The instruments are fitted with concave mirrors of 14 mm diameter for 1,5 m distance of scale; plane mirrors will be supplied upon special order only.

Cat. No.	Type	1 mm Deflection with 1 m Distance of Scale	Resistance of moving System	Total re-sistance	Duration of Oscillation (Half a period)	Net Weight	Price	Pack- ing
			Ohms	Ohms		Kilos	\$	\$
31502	6406	about 8×10-10	about 400	10000	6 Sec.	3,5	84.00	1 40
31503	6406b	25×10-10	150	1000	5 "	3,5	82.00	1 40
31504	6406c	250×10-10	30	200	2 "	3,5	78.00	1.40
31505	6406d	80×10-10	40	200	5 "	3,5	78.00	1.40
31506	6406a	{ 8×10-10 250×10-10	400 30	10000 200	6 " 2 "	} 3,8	120.00	1.40
31507	6406e	250×10-10	30	200	30 "			
Accessories								
31508	Carrying case 6406 I for Cat. Nos. 31502-31507 Each					5	12.00	0.40
31509	Shunt 6406 III for Cat. No. 31502 for insulation measurements (not for capacity measurements) with 5 divisions for $\frac{1}{4}$, $\frac{1}{9}$, $\frac{1}{99}$, $\frac{1}{999}$, $\frac{1}{9999}$ of the galvanometer resistance					1,4	30.00	0.20
31510	Shunt 6406 III a for Cat. No. 31502 for capacity and insulation measurements with 6 divisions for $\frac{1}{1}$, $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{10000}$ degrees of sensitiveness					1,4	34.00	0.20
31511	Shunt 6406 III b for Cat. No. 31502 for capacity and insulation measurements with 13 divisions for $\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{50}$, $\frac{1}{100}$, $\frac{1}{200}$, $\frac{1}{500}$, $\frac{1}{1000}$, $\frac{1}{2000}$, $\frac{1}{5000}$, $\frac{1}{10000}$ degrees of sensitiveness					3,0	54.00	0.40
31512	Adjustable magnetic shunt 6406 VII²⁾ , for varying the sensitiveness up to 40 %					0,5	16.00	0.20
31513	2 Spare suspension wires and 2 spare spirals ³⁾ in wooden box					0,1	3.60	0.10
31514	Key 6625 , mounted on ebonite, for short-circuiting and damping the moving coil					0,3	6.00	0.10

¹⁾ Other systems, upon inquiry.

²⁾ This shunt can be attached to any existing instruments.

³⁾ When ordering, please state type of apparatus.

Pointer Galvanometers Deprez - d'Arsonval System

Cat. No.	Article	Net Weight Kilos	Price \$	Pack- ing \$
31517	Pointer galvanometer 6396 c d'Arsonval system with 2×75 divisions, resistance about 75 Ohms, sensitiveness $10 = \text{about } 3 \times 10^{-7}$ Amp.	2,9	80.00	1.00
31518	Pointer galvanometer 6396 c same as Cat. No. 31517, but with about 300 Ohms resistance, sensitiveness $10 =$ about 1×10^{-7} Amp.	2,9	84.00	1.00

Porter's Multiple Crossed Diffraction Gratings

See the Physical Review, January 1907, page 126

These brilliant optical novelties are made by a patented process which enables us to secure on one plate a large number of diffraction gratings crossing at various angles so as to give a most gorgeous display of colors. They are equally good for hand use or for projection. Held in the hand, close to the eye, while looking at a small and brilliant source of light (preferably an electric arc) they show a dazzling series of radiating spectra. The effects are especially fine when two of the crossed gratings are superposed and slowly rotated in opposite directions.

To show the radiating spectra to advantage with the projecting lantern the following arrangement should be used: A round hole about 5mm. in diameter is drilled in a sheet metal plate, and the plate is placed in the lantern in such a position that the hole lies at the focus of the condensing lenses so that as much light as possible may pass through. The image of the hole is then focused on the screen, and the crossed grating is then merely held in the hand against the front of the mount of the projecting lens. The spectra then appear on the screen. The effects are particularly fine if the light forming the direct image of the hole is screened off by means of a blackened card held in a clamp anywhere between the projecting lens and the screen. When this is done, the spectra appear to be more brilliant, for the eye is no longer dazzled by the light from the central spot.

These crossed gratings are made in two sizes, and are sold in sets of four having respectively 4, 8, 16, and 32 gratings crossing at symmetrical angles. The individual gratings have about 2888 lines to the inch.

- C 913 Porter's Multiple Crossed Diffraction Gratings,**
set of four, with $2\frac{1}{4}$ inch circular ruled surfaces, having
respectively 4, 8, 16, and 32 crossed gratings..... **\$8.00**
- C 914 Same,** set of four, with ruled surfaces 1 inch square..... **4.00**