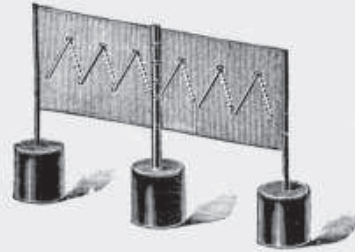


4990/4993.



5011 A.



5011 B.



5011 C.

up to 10 volts. The scale is carefully graduated. [Fig. $\frac{1}{6}$ nat. size; the form pictured frequently in the text books is out of date, and no more will be supplied.] For lecture experiments on frictional electricity, induction capacity of a condenser, alteration of the capacity by inserting dielectrics etc. electrometers No. 4990 and 4991 are sufficient. The electrometers No. 4992 and 4993 serve for the illustration of Ohm's Law; one of the instruments No. 4990 and 4991 serve in that case as a discharge electrometer. In most cases, No. 4991 and 4993 are sufficient. The instruments are placed on a horizontal base.

No.	4990.	4991.	4992.	4993.
up to	1500	1500	3500	3500 volt
graduated	100×100	500×500	100×100	500×500
\$	13,00	9,50	14,00	11,00

If they are absolutely neutral (free from residual electricity) the needle should be at zero. In this position friction is most felt, a small deviation either to the left or right is accordingly without significance. For purposes of measurement the case is enclosed as far as possible by metal; a zinc cover provided with aperture for reading being inserted beneath the glass front. The needle is allowed to swing freely, without tapping, to prevent alteration of the position of the needle relatively to the repelling metal strip. For lecture purposes the glass plate alone remains in the instrument and it is placed so that the light falls from behind. The pointer is seen best when the glass plate at back is covered with tissue paper. This is most easily done by taking a piece of tissue paper somewhat larger than the glass plate, laying it on and after removal of the screw heads, pressing it into the case and the excess of paper being cut away. At night a lamp is placed behind the instrument. The deflection is plainly seen throughout a room seated for 100 auditors.

5011. **Seat of electricity on the surface**, Vandervliet's apparatus as modified by Rosenberg. (W. D., p. 607.) This apparatus consists of a fine iron wire netting (42×17 cm) which is supported at the middle and at both ends by good insulating

vulcanite rods, and is fixed in three iron feet. The net carries on both sides at regular intervals small strips of paper, differently coloured, so that each side shows the same coloured strips. In despatching the wire net with the vulcanite rods is laid between 2 boards and these are screwed up. On receipt the boards are carefully unscrewed, and the three vulcanite rods pushed into the three iron feet. We furnish further, a rectangular board on which the apparatus is erected, so that it may be conveniently carried about. [Fig. A, B and C, 1/12 nat. size, p. 165.]

\$ 3,00

The wire netting is so adjusted that it forms a straight line, and the paper strips on electrification are repelled from both sides, as shown in Fig. A. The feet at the ends are moved so that the net forms a circle, or the arc of a circle, without touching the net, the paper strips then lie against the inner side of the net, whilst those on the outer are repelled more than before. [Fig. B.] By arranging the end feet, the net may be made to form an S. On the convex parts of the net the paper strips are briskly repelled, whilst on the concave sides they hang down. [Fig. C.] An electrified vulcanite or glass rod is all that is necessary for charging the apparatus.

5017. **Ellipsoid** for the distribution of electricity on a surface, on insulated stand. [Fig. 1/8 nat. size.]

> 7,50

5018. **Mach's apparatus to show action of edges.** (W. D. Fig. 439, p. 666.) [Fig. 1/6 nat. size.]

> 1,50

The arrangement Fig. 5018 A is held in one hand by the two handles, so that it takes up the shape sketched in Fig. 5018 B, and on electrification a small divergence of the pendulum is obtained, if the arrangement is held by both hands as shown in Fig. 5018 C. the divergence is greatly increased.

5019. **Alteration of the density on altering the size of the conductor,** Mach's. (W. D. Fig. 440, p. 667. [Fig. 1/9 nat. size.]

> 3,75

In order that the experiment should certainly be successful, the apparatus must be well dried best over a heating arrangement on the experimental table. The apparatus is strongly charged by a rubbed vulcanite rod so that the 4 paper rolls are nearly horizontal. [Fig. 5019 A.] A well dried glass rod is put through ring B, and draws the 4 metal cylinders away from one another, the divergence of the leaves increases [Fig. 5019 B.] The metal cylinders on again being replaced cause the divergence to assume its original size.

5056. **Electrophorus** of durable resin, in metal plate with metallic screen; handle of vulcanite, diameter 310 mm. [Fig. 1/10 nat. size.] The fox tail No. 4938, p. 161 is used for flicking

> 2,25

5068. **Electrophorus capable of being taken to pieces,** consisting of thin square metal bottom plate, vulcanite disc, and double walled metal cover with vulcanite handle

> 1,50

5072. **Ramsden's frictional electrical machine,** the plate of best glass with sprung rubber; oil silk flap, brass conductor and ring comb. Diameter of disc 390 mm. [Fig. 1/9 nat. size.]

> 12,50

— **another form, on mahogany stand.** [Fig. 1/10 nat. size, p. 168.]

	No. 5083.	5084.	5085.	5086.	5087.	5088.
Diameter of plate	450	500	550	600	650	800 mm
	\$ 46,50	50,00	65,00	70,00	83,00	125,00

5118. **Influence machine,** modified Töpler system, self starting, with one fixed and one movable disc. Diameter of disc 390 mm. [Fig. 1/9 nat. size.]

> 35,00

5130. **Wimshurst's Influence machine,** highly finished, with two glass plates revolving in opposite directions. The machine is self excited, even when the air is very moist. Diameter of plate 430 mm. [Fig. 1/10 nat. size, p. 168.]

> 48,00