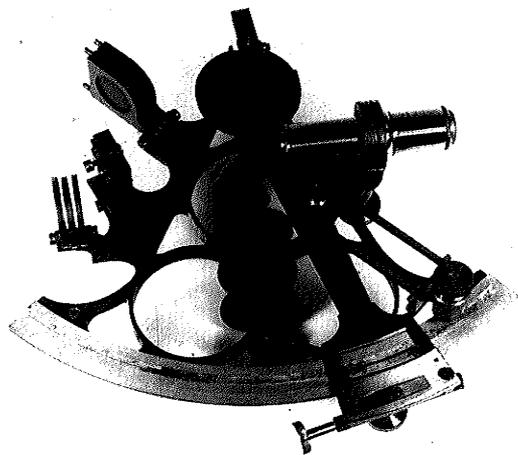


micr., csm.; silver arc divided $-5-160^\circ$ to $10'$, vrn. to $10''$; ebony handle; 3 feet; alternative tel., dark tube; 2 ep. shades; marked: 314; box with Class A Kew Certificate, dated June 1893; r: 165 mm, ia. 1: 218 mm.

Presented by Estate Management and Building Service.



Catalogue No. 160

161 SEXTANT Wh: 2132
Stanley. Gt. Turnstile, London
c.1900 Illustrated

Ob.; T frame; im., 4 shades; hor. glass, 3 shades; tel. sight; ia., micr., csm.; silvered arc divided $-5-155^\circ$ to $15'$, vrn. to $15''$; ebony handle; 3 feet; dark tube; ep. shade; box; r: 177 mm, ia. 1: 232 mm.

Presented by the Institute of Astronomy

162 SEXTANT Wh: 1294
M. Walker & Son. Glasgow & Greenock
c.1900

Ob.; optical components entirely missing; ia., micr., csm.; silver arc divided $-5-130^\circ$ to $15'$, vrn. to $15''$; wood handle; 3 feet; r: 187 mm, ia. 1: 240 mm.

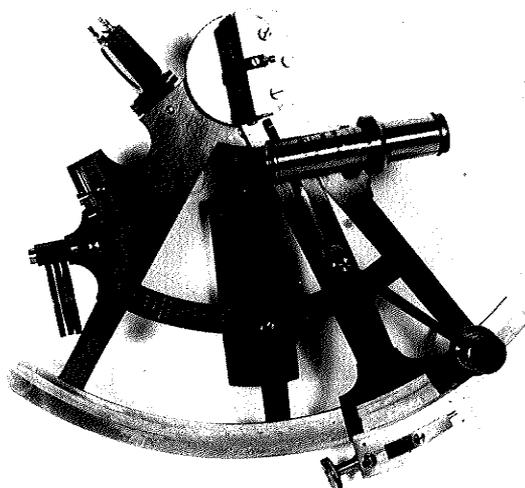
163 SEXTANT Wh: 1490
Henry Hughes & Son, 59, Fenchurch St., LONDON
c.1900

Ob.; 3-circle frame; im., 4 shades; hor. glass, 3 shades; tel. sight., lta.; ia., micr., csm.; silver arc divided $-5-160^\circ$ to $10'$, vrn. to $10''$; ebony handle; 3 feet; 2 dark tubes; marked: 4261; box with trade labels of H. Hughes & Son, C. Baker; r: 156 mm, ia. 1: 210 mm.

164 SEXTANT Wh: 2844
Laderrière à Paris
c.1900

Ob.; modified lattice frame; im., 4 shades; hor. glass, 3 shades; tel. sight, lta.; ia., micr. csm; silvered scale divided $-5-160^\circ$ to $10'$, vrn. to $10''$; wood handle; 3 feet; alternative tel., dark tube; 2 ep. shades; marked: *SERVICE HYDROGRAPHIQUE 126*; box; r: 185 mm, ia. 1: 240 mm.

Purchased.



Catalogue No. 161

Reflecting circles

165 REFLECTING CIRCLE Wh: 926
Troughton London
c.1800

Ob.; Troughton type; im., 3 shades; hor. glass, 3 shades; tel. sight, lta.; 3 ias. (micr. missing), csm.; silvered 720° scale divided to $20'$, vrn. to $20''$, part numbered $160^\circ-0-160^\circ$; wood handles; marked: 72; r: 134 mm.

Presented by R.S. Whipple.

166 REFLECTING CIRCLE Wh: 2123
Troughton London
c.1805 Illustrated

Brass; Troughton type; im., 3 shades; hor. glass, 3 shades; tel. sight, lta.; 3 ias., micr.; csm.; silver 720° scale divided to $20'$, vrn. to $20''$, part numbered $160^\circ-0-160^\circ$; wood handles; pillar stand, co. wts., tbr. base, lev. screws; alternative tel., dark

tube, 2 eps.; marked: 163 and *Camb. Obs. Refl. Circ.*; r: 156 mm.

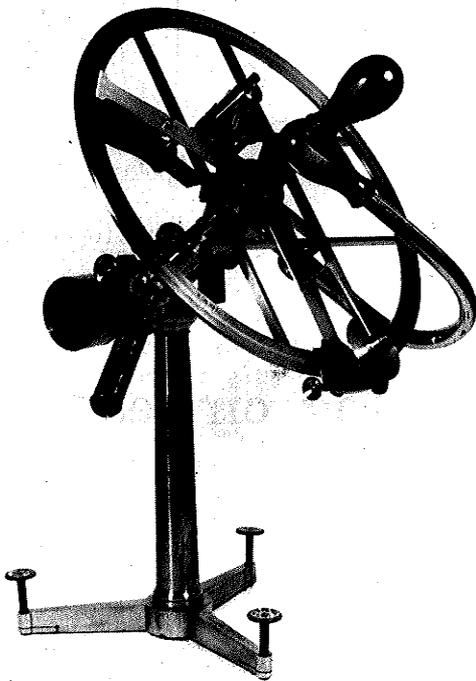
Presented by the Institute of Astronomy.

167 REFLECTING CIRCLE
Troughton London
c.1810

Wh: 1079

Brass; Troughton type; im., 3 shades; hor. glass, 3 shades; tel. sight, lta.; 3 ias. (micr. missing), csm.; gold 720° scale divided to 20', vrn. to 20", part numbered 140°-0-140°; wood handles; pillar stand, co. wts., tbr. base, lev. screws; mercury artificial hor., cover, wood bottle; marked: 218; r: 132 mm.

On loan from St John's College
Belonged to Thomas Catton (1760-1838), Gunther no. 227, see pp. 171-2 (illustrated, p. 202).



Catalogue No. 166

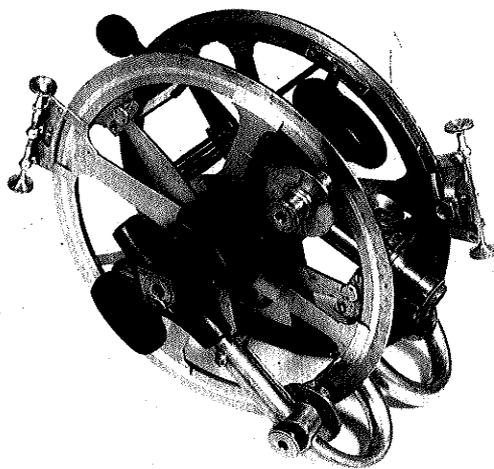
168 DOUBLE REFLECTING CIRCLE
Schmalcalder 82 Strand London
c.1815

Wh: 2692

Illustrated

Brass; optical components between 2 circles; 2 ims., 4 shades; double hor. glass, 2 shades; tel. sight, lta.; each circle has 4 ias., micr., csm., silver scale divided 0-180°-0 twice, to 20', centre-zero vrn. to 20", micro. for zero reading; wood handles; ep. shade; d: 213 mm, between circles: 64 mm.

Purchased.



Catalogue No. 168

169 REFLECTING CIRCLE
Gambey a Paris
c.1825

Wh: 475

Brass; Borda-type repeating circle; linked sight mt., hor. glass, inner brass arc divided 150°-0, 0-130° to 1°, vrn. moving on circle, csm. (tel. and shades missing), pivot together about centre; independent motion for im., ia., gl., vrn., csm.; silver scale divided 0-720° to 20', vrn. to 20"; s-f. wood handle; marked: No. 55; r: 133 mm.

Presented by R.S. Whipple.

170 REFLECTING CIRCLE
Secretan à Paris
Mid 19th century

Wh: 2121

Illustrated

Brass; Borda-type repeating circle; linked hor. glass. shade, tel. sight, lta., inner brass arc divided 180°-0, 0-180° to 1°, vrn. moving on circle, csm., shade for im., pivot together about centre; independant motion for im., ia., micr., vrn., csm.; silver scale divided 0-720° to 20', vrn. to 20"; s-f. wood handle; 2 alternative tels., 9 shades, 2 ep. shades; box with Secretan trade label; r: 135 mm.

Presented by the Institute of Astronomy.

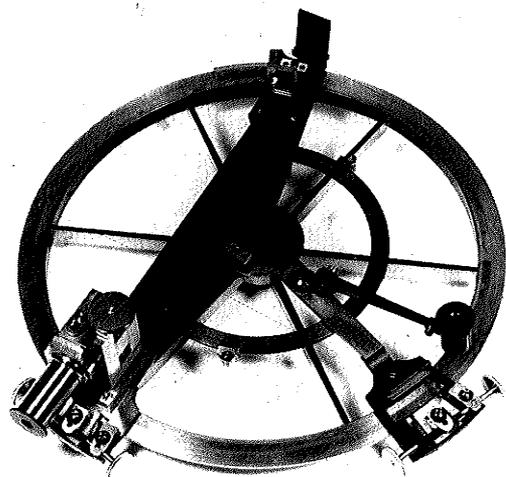
171 REFLECTING CIRCLE
PISTOR & MARTINS BERLIN
c.1880

Wh: 2199

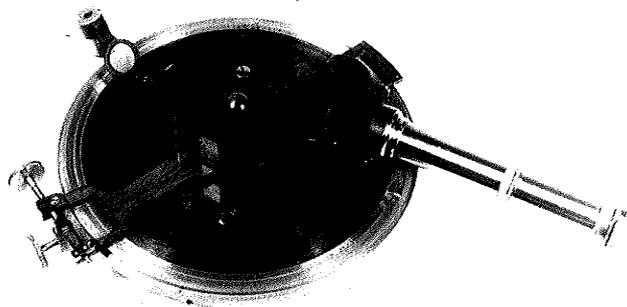
Illustrated

Ob.; solid plate circle; im.; prism (acting as hor. glass); tel. sight, lta., ep. shades; 2 ias., gl., micr., csm.; silver 720° scale divided to 20', vrn. to 20", part numbered 350°, 240°-180°, 130°-0; ebony handle; marked: 811; r: 84 mm.

Presented by the Department of Geography.



Catalogue No. 170



Catalogue No. 171

Artificial horizons

172 ARTIFICIAL HORIZON COVER Wh: 1088
c.1800

Wooden triangular framework, one glazed cover (one missing), angle between covers adjustable; marked: *St John's Coll./Camb.*; o'all: 253 mm x 122 mm x 172 mm.

On loan from St John's College.
Gunther no. 223 (illustrated p. 196).

173 ARTIFICIAL HORIZON Wh: 1093
c.1825

Circular black glass mirror; brass mt., 3 lev. screws; d: 98 mm.

Presented by the Cavendish Laboratory.
Collection of W.H. Wollaston, *loc.cit.* (item 22).

174 ARTIFICIAL HORIZON Wh: 2828
TROUGHTON & SIMMS/LONDON
c.1850

Circular black glass mirror; brass mt., 3 lev. screws; bubble level; fitted box with Troughton & Simms label; d: 71 mm.

Purchased.

175 ARTIFICIAL HORIZON Wh: 2663
L. CASELLA, Maker to the Admiralty & Ordnance, LONDON
c.1870

Rectangular black glass mirror; ob. mt., 3 lev. screws; bubble level; marked: *No.87*; o'all: 155 mm x 90 mm.

176 ARTIFICIAL HORIZON Wh: 2119
H. HUGHES & SON, OPTICIANS, /59, FENCHURCH STREET, LONDON
c.1890

Mercury-type; cast iron trough, glazed triangular cover, metal bottle; o'all: 165 mm x 92 mm x 107 mm.

Presented by the Institute of Astronomy.

177 ARTIFICIAL HORIZON Wh: 566
19th century

Circular black glass mirror; brass mt., 3 lev. screws; bubble level; d: 56 mm.

Presented by R.S. Whipple.

178 ARTIFICIAL HORIZON Wh: 2664
Late 19th century

Mercury-type; cast iron rectangular trough with glass float, attached mercury reservoir and piston; 3 lev. screws; o'all: 220 mm x 180 mm x 100 mm.

179 ARTIFICIAL HORIZON Wh: 2731
NEGRETTI & ZAMBRA/LONDON
c.1900