

CATALOG PART 2000

(DECEMBER 1929 EDITION)

Tycos

Meteorological and Other
Scientific Instruments

Barometers, Compasses, Rain Gauges, "Stormographs",
Thermographs, Anemometers, etc.

Tycos Instruments of American Manufacture

(Pages 4 to 37)

S. & M. *Tycos* Instruments of English Manufacture

(Pages 40 to 65)

S. & M. *Tycos* Instruments of English Manufacture
For Import Orders Only

(Pages 68 to 74)

All trade marks and trade names registered
U. S. Patent Office

Taylor Instrument Companies

ESTABLISHED 1851

Executive Offices and Factory

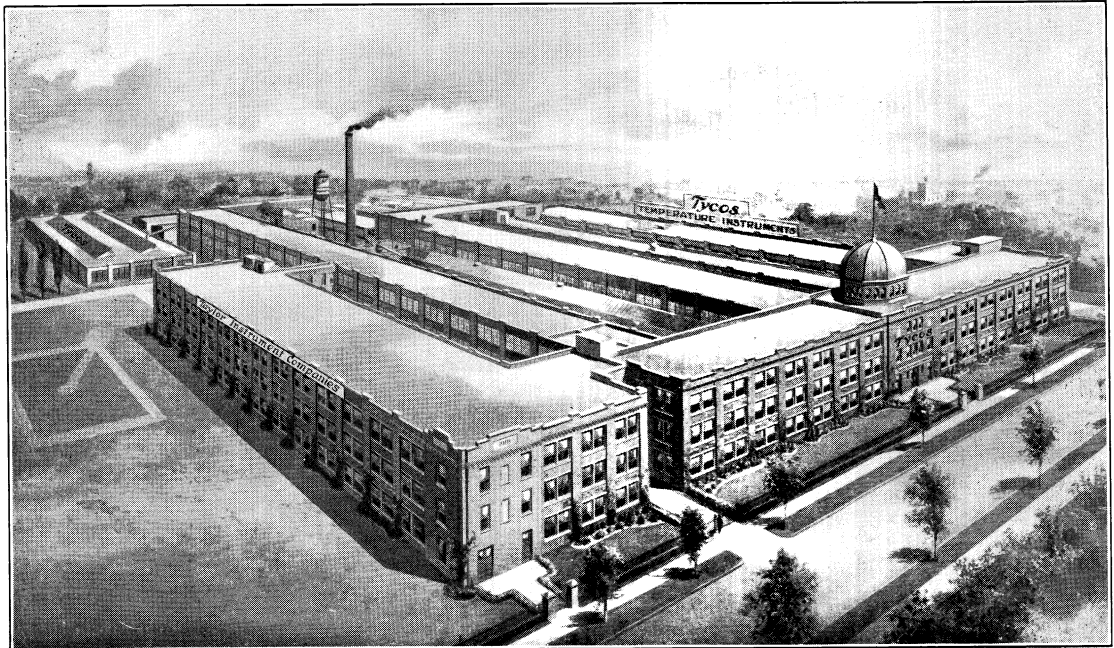
Rochester, N. Y., U. S. A.

Canadian Plant, *Tycos* Building, Toronto, Canada

Branch Offices

NEW YORK	CHICAGO	BOSTON	PHILADELPHIA	PITTSBURGH	CLEVELAND
SEATTLE		LOS ANGELES	INDIANAPOLIS		SAN FRANCISCO
ST. LOUIS	CINCINNATI	TULSA	DETROIT	ATLANTA	MINNEAPOLIS

Manufacturing Distributors in Great Britain,
Short & Mason Ltd., London



HOME OF *Tycos* PRODUCTS

IN ADDITION TO THE NUMBERS LISTED IN THIS CATALOG WE MANUFACTURE A COMPLETE LINE OF INSTRUMENTS FOR INDICATING, RECORDING AND CONTROLLING TEMPERATURE AND PRESSURE

SOME OF THESE ARE

- INDUSTRIAL THERMOMETERS
- CAPILLARY RECORDING THERMOMETERS
- SELF-CONTAINED RECORDING THERMOMETERS
- CAPILLARY INDEX (DIAL) THERMOMETERS
- THERMOELECTRIC PYROMETERS; INDICATING AND RECORDING
- FÉRY RADIATION PYROMETERS
- TEMPERATURE-CONTROLLING DEVICES
- TIME CONTROLS
- CAPILLARY ELECTRIC-CONTACT TEMPERATURE CONTROLS
- LABORATORY ENGRAVED THERMOMETERS
- HYGROMETERS (WET-AND-DRY-BULB) INDICATING AND RECORDING
- OUTDOOR AND HOUSEHOLD THERMOMETERS
- MEDICAL AND GENERAL-USE THERMOMETERS
- COAL-OIL TESTING INSTRUMENTS

WE ALSO MAKE

- HYDROMETERS, MERCURY-COLUMN VACUUM GAUGES, MERCURIAL BAROMETERS
- SPHYGMOMANOMETERS, ETC., ETC.

CATALOGS COVERING ANY OF ABOVE. ON REQUEST (See List on Page 76)

THE IMPORT SECTION OF THIS CATALOG (pages 40 to 74) LISTS INSTRUMENTS IMPORTED FROM SHORT & MASON, LONDON; SUCH AS

- SURVEYING BAROMETERS, VERSCHOYLE TRANSITS
- POCKET ALTITUDE BAROMETERS, RECORDING BAROMETERS BAROGRAPHS),
- RAIN GAUGES, SUNSHINE RECORDERS
- THERMOGRAPHS, HYGROGRAPHS (RECORDING HYGROMETERS), ANEMOMETERS, COMPASSES,
- GAS-PRESSURE GAUGES, GAS-LEAK INDICATORS, ETC.



Foreword

THIS catalog shows our present line of Aneroid Barometers, Compasses, Thermographs and Meteorological Instruments.

The first part of the catalog (*pages 4 to 37*) covers the *Tycos* line made in the Rochester factory. The Short & Mason English-made line will be found in the second and third parts (*pages 40 to 74*). The catalog in its entirety makes a comprehensive line of Meteorological Instruments.

If you are looking for instruments not shown in this catalog, send us particulars, that we may have an opportunity of advising whether we can furnish them.

Although we are carrying a larger stock of Short & Mason instruments than ever before, we cannot always ship all items from stock. Will you therefore ask us about delivery before making definite promise on any of this imported line?

Both the *Tycos* and *Taylor* Domestic line and the Short & Mason *Tycos* Imported line are now so well known and in such constant demand that dealers will be well repaid for studying this catalog closely.

Terms of Sale and Points to be Observed in Ordering Goods

- 1—Always order by catalog number.
- 2—We employ the most experienced packers, and observe every possible precaution in the packing of goods, to avoid damage during transportation. Our prices are all based on "f.o.b. Rochester" terms, and we can assume no responsibility for breakage or other damage after a package leaves our premises and is receipted for in good order by the transportation company.
- 3—Our terms are "net thirty days, f.o.b. Rochester, N. Y., U. S. A." No discount for prepayment.
- 4—*Prices subject to change without notice.*

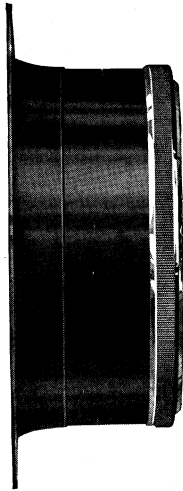
Cable Address: "*Tycos-Rochester*"

Codes Used: A. B. C. All Editions; Western Union—Universal and 5 Letter;
Lieber's, Bentley's, Commercial and Private



Tycos Auto-Altimeters

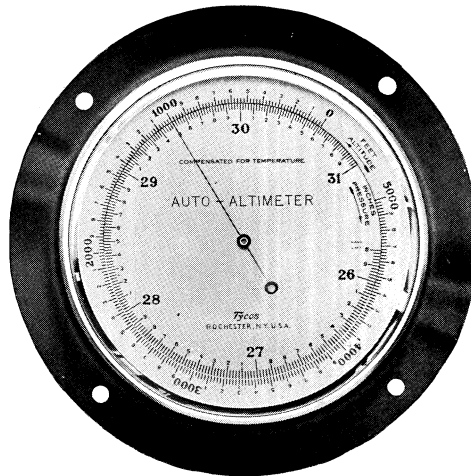
Combined Altitude Indicator and Weather Barometer, for Automobiles
(American Manufacture)



Side View of Nos. 2073C,
2073D and 2073F

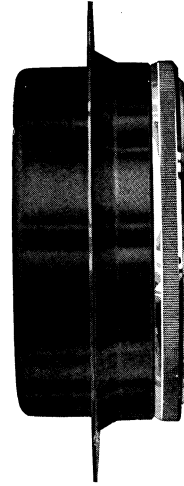
For Offset Mounting

1 3/8-inches deep.



No. 2073C

(Illustrations about two-thirds actual size)



Side View of Nos. 2073 1/2 C,
2073 1/2 D and 2073 1/2 F

For Inset Mounting

5/8-inches deep above flange.
11/16 " " below "

The *Tycos* Auto-Altimeter registers automatically on its dial the altitude of one place above another. Made in three ranges, to measure upwards to 5,000, 10,000 and 16,000 feet, respectively.

The exhilarating effect of a trip is governed by the altitude of the route traversed. A person is not equally comfortable at all altitudes.

Without an altitude barometer you are compelled to consult a table of altitudes if you want to know the elevation of the place you are passing.

There is no secret about the *Tycos* Auto-Altimeter—it is merely an altimeter like those used on aircraft, but specially built for service on an automobile.

Second only to your speedometer in interest. Not affected by the jolting or vibration of the car.

Works as a weather indicator when car is running around town.

	EACH
No. 2073C <i>Tycos</i> Auto-Altimeter	\$35.00
Scaled to 5,000 feet, in 20-foot divisions; flange at back for screwing to cowl. Size 3 inches across front; 4 inches over flange. Each in a cardboard box. Weight about 13 ounces.	
No. 2073 1/2 C Same as No. 2073C, except flange at front of case, so that body of instrument can be accommodated to hole cut in cowl.	35.00
No. 2073D Same as No. 2073C, except reading to 10,000 feet in 50-foot divisions.	36.50
No. 2073 1/2 D Same as No. 2073 1/2 C, except reading to 10,000 feet in 50-foot divisions.	36.50
No. 2073F Same as No. 2073C, except reading to 16,000 feet in 50-foot divisions.	39.00
No. 2073 1/2 F Same as No. 2073 1/2 C, except reading to 16,000 feet in 50-foot divisions.	39.00

Complete instructions for use with all of above instruments.



Tycos Auto-Altimeters

Directions for Use as an Altitude Indicator

The *Tycos* Auto-Altimeter should be screwed to the cowl, or if installed for the benefit of back-seat passengers, a point above the robe rail is very convenient. It can if desired be used in conjunction with the speedometer.

The altitude scale is made to revolve by turning with the fingers. It is a very simple matter to "set" the instrument before starting a run.

There are two methods of determining altitudes with the *Tycos* Auto-Altimeter:

(a) If you make a start from Syracuse you can turn the silver-plated ring carrying the altitude scale, so that the hand will indicate 398 feet (the height of Syracuse above sea level.) You then drive to Binghamton. Your instrument on arrival there shows 863 feet. This is the height of Binghamton above sea level. Or, by deducting 398 from 863, the resulting 465 feet represents the difference in altitude between Syracuse and Binghamton. The *Tycos* Auto-Altimeter indicates differences of altitude as you drive, information which is always of interest.

(b) Or, in starting from Syracuse you can set the altitude scale so that the hand points to "0." On arrival at Binghamton the *Tycos* Auto-Altimeter will show 465 feet, which is the difference in altitude between Syracuse and Binghamton. To get the height of Binghamton above sea level, you simply add the altitude of your starting place—Syracuse—which is 398 feet.

Instrument reading at Binghamton, N. Y.....	465 feet
Height of starting place (Syracuse, N. Y.) above sea level....	<u>398 feet</u>
Height of Binghamton above sea level.....	863 feet

It is necessary to know only the altitude of your starting place. Other altitudes are determined by the *Tycos* Auto-Altimeter.

In traversing a route of **increasing** elevation, either of the methods of setting can be adopted.

If the route be of **decreasing** elevation—when you are descending to the lakes or the coast, for example—the former method of setting is essential; that is, the *Tycos* Auto-Altimeter must show the height of your starting place above sea level. The readings will then indicate at all times your actual height above sea level.

As a Weather Indicator

When the car is put away, if the scale of the altimeter be set at "0", when it is next consulted it will indicate coming weather probabilities, according as the hand is rising or falling.

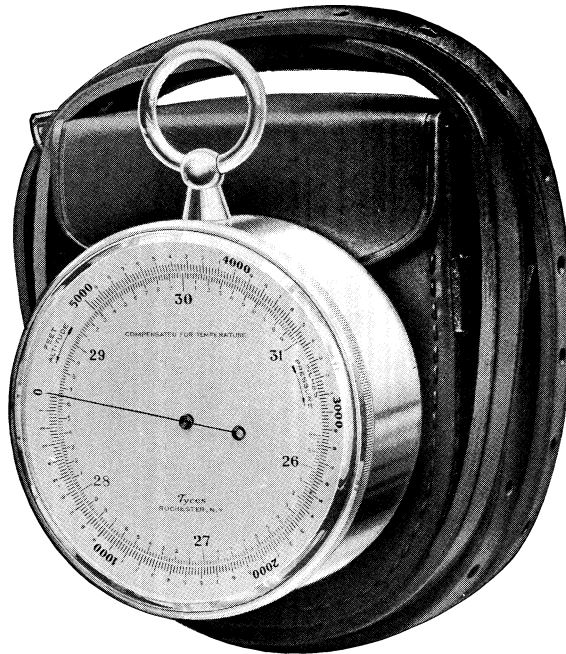
A "rising barometer" generally means fine weather with cool breezes.

A "falling barometer" indicates wet, windy, or warmer weather.



Tycos Altitude Barometers

(American Manufacture)



No. 2075CK
(About two-thirds actual size)

The greatest difficulty met with in the past in the use of altitude barometers has been that their altitude scales were unequally divided, and as a consequence they either had to be used with the zero of the scale at a fixed point and a sum worked out for correct readings, or the scales made to revolve so the zero could be set at 0 feet. If used the latter way the readings were approximate only and the higher the altitude the greater the error.

The *Tycos* Altitude Barometer is "direct-reading". The scales have been redesigned, the altitude scale being made in equal divisions. All chance of error is eliminated.

It is truly an American instrument for America, since the scales are designed from the U. S. Standard Tables and will be found correct at all points.

The movement is compensated carefully, to offset the effect of changing temperature, and it is recommended confidently as an ideal altitude barometer for the tourist, surveyor, geologist, engineer and all others to whom information on altitude is of interest and value.

No. 2075CK *Tycos* Altitude Barometer **EACH \$42.00**

Exclusive design; best-grade movement, compensated for temperature; aluminum case; revolving altitude scale to 5,000 feet in 20-foot divisions; 3 inches in diameter. In velvet-lined leather sling carrying case. Weight 9 ounces.

No. 2075DK Same as above, except reading to 10,000 feet in 50-foot divisions. **43.00**

No. 2075FK Same as above, except reading to 16,000 feet in 50-foot divisions. **46.00**

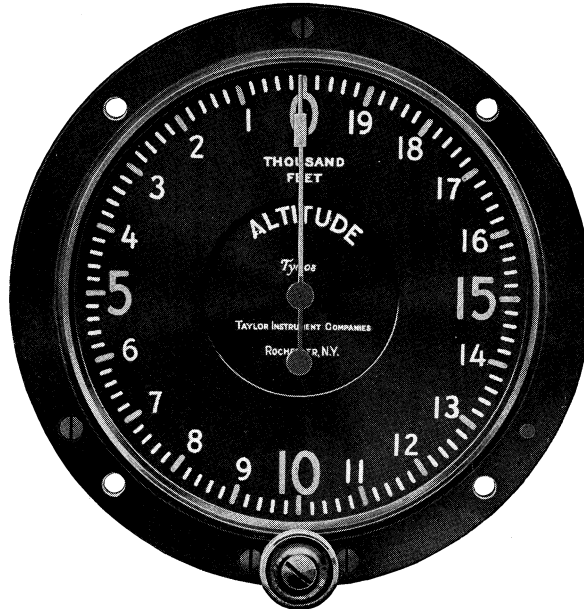
NOTE—This instrument can be used also as a highly-sensitive weather forecaster. Complete instructions and forecasts accompany each barometer.



Tyco's Aviation Altitude Barometers

(American Manufacture)

As supplied to U. S. Navy, U. S. Signal Corps, Bureau of Aircraft Production, and Leading Aircraft Builders



No. 2-H-20-R
(About two-thirds actual size)

A superlatively fine instrument for indicating the altitude of aircraft.

We have no hesitancy in saying that the *Tyco's* Altimeter is the most perfectly adjusted and mechanically accurate instrument being offered today for this purpose.

The mechanism is delicately constructed, yet remarkably durable, and each instrument before being finally passed is subjected to a series of tests such as are encountered in actual use. The mechanical compensation for temperature is effective in extremes of heat and cold, insuring as perfect results as are possible.

No. 2-H-20-R	<i>Tyco's</i> Altimeter.....	EACH \$80.00
	Reading to 20,000 feet; 4½ inches in diameter; dial set by rack and pinion. Each in a card-board box. Weight about one pound.	
No. 2-H-25	Same as No. 2-H-20-R, except reading to 25,000 feet.....	80.00
No. 2-H-30	Same as No. 2-H-20-R, except reading to 30,000 feet.....	80.00

Extra for Radium Dials Only

Hand, and figures at every 500 and 1000 foot division, painted with a radium preparation:—

DESCRIPTIVE LETTER		EXTRA
"R"	For 20,000-foot dials.....	\$4.00
	For 25,000-foot dials.....	4.00
	For 30,000-foot dials.....	4.00

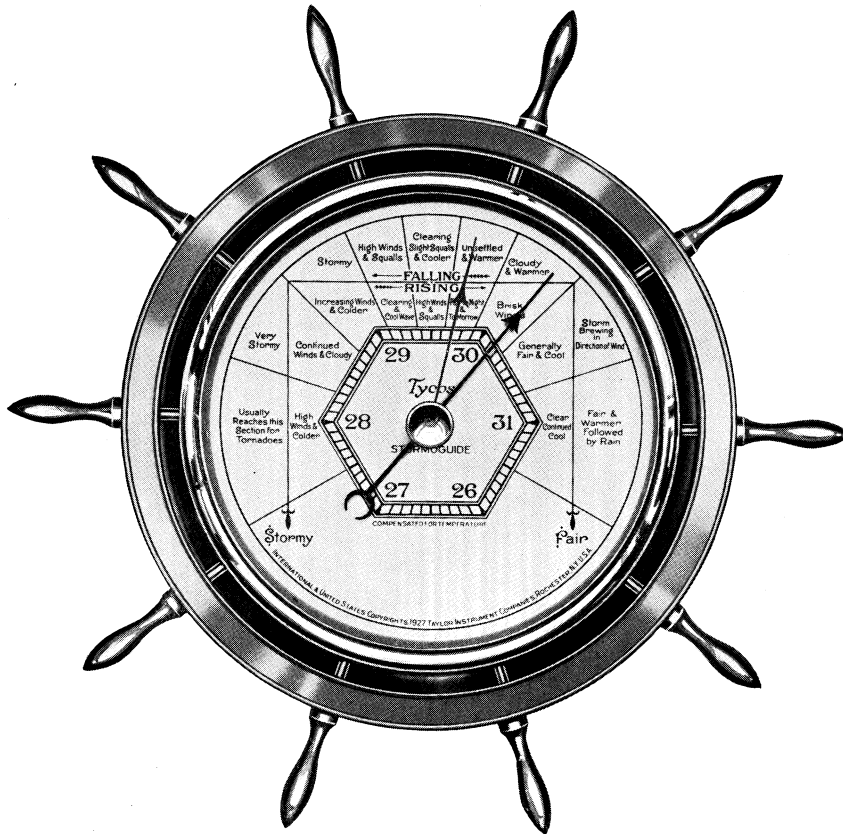
Send for our Aeronautical-Instrument Catalog Part 2000A



Tycos Yacht-Pattern "Stormoguides"

The Simplified Barometers

(American Manufacture)



No. 2231

(About one-half actual size)

For the yacht or home this attractive "Stormoguide" in its steering-wheel-type brass case is most appropriate.

This instrument makes an excellent trophy or gift, as its usefulness and attractiveness last indefinitely.

No. 2231 Tycos Yacht-Pattern "Stormoguide" EACH \$40.00

Polished-brass case of steering-wheel design, 5" in diameter, 2 3/8" deep, drilled back-flange 6 5/8" in diameter; sheet-glass crystal; closed silvered-metal dial; range 26 inches to 31 inches; for altitudes 0 to 3500 feet; furnished with three mounting screws; movement is compensated for temperature. Weight 45 ounces.

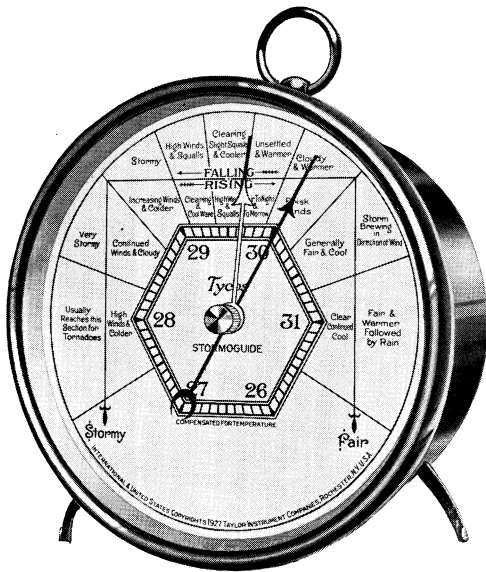


Tycos and Taylor Brass-Case "Stormoguides"

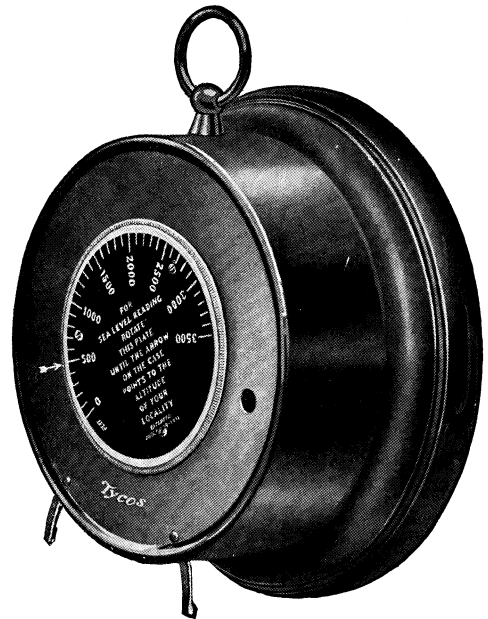
The Simplified Barometers

(American Manufacture)

Patent No. 1,107,496



No. 2256X. (Front View)



No. 2256X. (Back View)

(Illustrations about one-half actual size)

The Simplest Form of Barometer to Read

Barometers are instruments essential in weather forecasting. For years they have been made with weather words "Fair," "Change" and "Stormy" at definite positions on the dial, and for years to come many will be made this way. The "Stormoguide" now offered you is much simpler to read, however, since complete forecasts are plainly shown on the dial.

The weather forecasts on the dial of the "Stormoguide" are based on barometer indications at sea level. To furnish correct readings at an altitude above sea level a barometer must be adjusted to allow for the effect of the altitude on the reading of the instrument. The "Stormoguide" provides for this by having an altitude plate fitted in its back. To make the adjustment it is necessary simply to revolve the back plate with the fingers until the arrow engraved in the back of the case points to the proper altitude indications for the location in which the instrument is to be used.

No. 2256X Tycos Brass-Case "Stormoguide" **EACH \$25.00**

Movement compensated for temperature changes; round antique-finish brass case, with ring at top for hanging, and feet which fold into case when not in use; 5-inch etched silvered-metal dial; sheet-glass crystal; for altitudes 0 to 3,500 feet. Each in a cardboard box. Weight about 1 3/4 pounds.

No. 2255 Taylor Brass-Case "Stormoguide" **18.00**

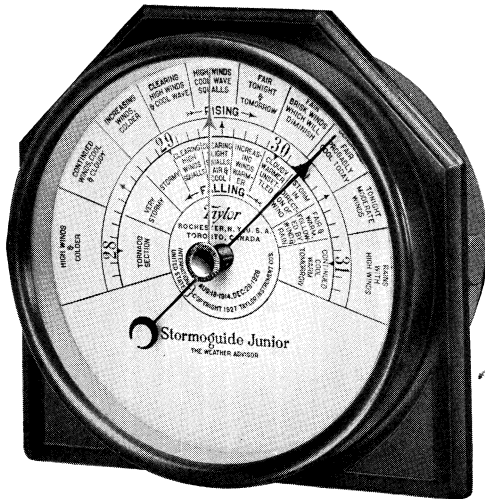
Ordinary-grade movement (not compensated); round blue-bronzed brass case, with ring at top for hanging, and with folding feet; sheet-glass crystal; five-inch white-enameled dial; for altitudes 0 to 3500 feet. Each in a cardboard box. Weight about 1 3/4 pounds.



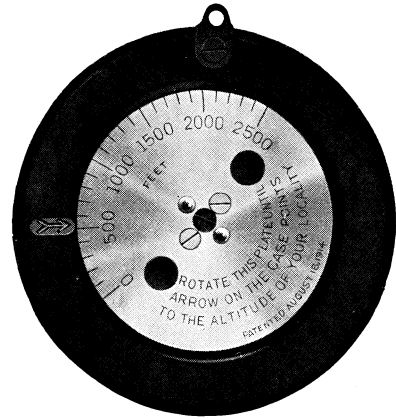
Taylor "Stormoguide Junior"

The Little Weather Advisor

(American Manufacture)



No. 2258
Front View
Fig. 1.



No. 2258
Showing revolving back for adjusting to altitudes
Fig. 2.

(Illustrations about one-half actual size)

When you talk weather to farmers, business men, bus and taxi' operators, you are talking in terms of cold hard cash. Weather can make or break them. Their profits depend on good weather and their losses are the result of bad weather. These people offer a tremendous market for a reliable weather forecaster at a reasonable price.

"Stormoguide Junior" is the outcome of this demand. It is a sturdy, reliable barometer with a dial that interprets changes in the atmospheric pressure in terms of weather probabilities for the next twelve to twenty-four hours. This advance warning means to the farmer that he can plan his work to the coming weather. A "Stormoguide Junior" will probably save many times its cost during the harvest season alone. The business man can plan his trips and golfing days to conform with the coming weather. Bus companies and taxi' companies are warned of coming storms and can assemble their equipment in time to take care of rush business.

The price of "Stormoguide Junior" by no means indicates that it is a cheap-grade instrument. It has a good-grade aneroid movement in a mahogany-finish moulded bakelite case designed to stand on table, desk, or mantel. The clear, legible dial shows the weather forecast at a glance. A metal hanger is furnished for attaching instrument to wall. Attractive enough for the best home or office, it makes an out-of-the-ordinary gift.

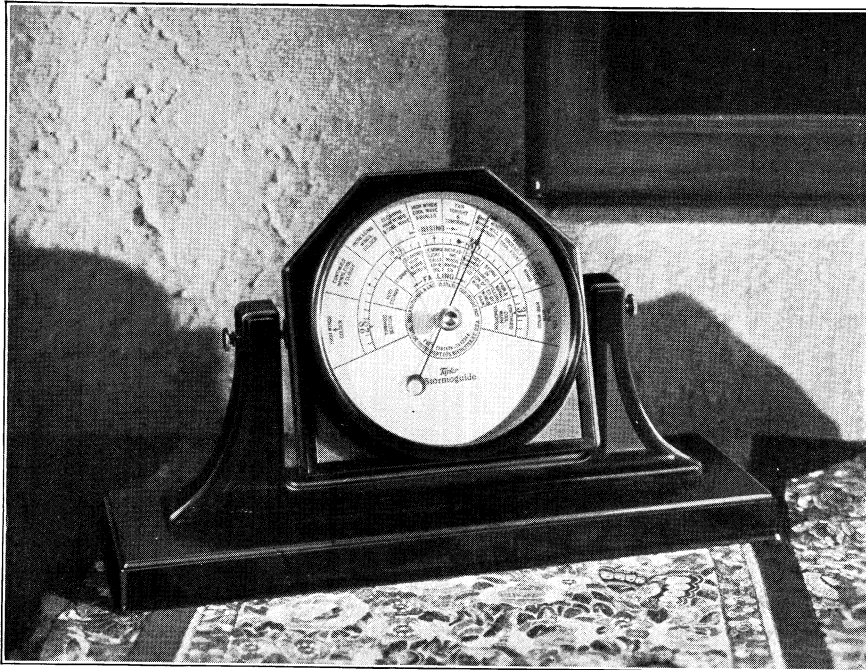
The illustration "Fig. 2" shows a feature of "Stormoguide Junior" that lifts it out of the ordinary class of inexpensive barometers. This is its adjustment for compensating for any altitude from 0 to 2500 feet, which has hitherto been an exclusive feature of high-priced barometers.

NO. **2258** Taylor "Stormoguide Junior" **\$10.00** EACH

Mahogany-finished bakelite case to stand or hang; 4½" dial; good-grade movement; for altitudes 0 to 2500 feet. Weight each, packed for shipment, about 3½ pounds.

Taylor Stand "Stormoguide"

The Weather Advisor
(American Manufacture)



No. 2259
(About one-third actual size)

Plain, simple, dignified, this Taylor "Stormoguide" in its handsome bakelite case is not out of place in the most beautiful surroundings.

Since atmospheric pressure is the same inside the house as out-of-doors, it is not necessary to expose the instrument outside for accurate indications. On the mantel, desk, or table its sectored dial gives pertinent forecasts of weather probabilities for the next twelve to twenty-four hours. It should not be exposed to direct rays of the sun, or other excessive heat.

It has the same revolving-back feature as No. 2258 (listed on page 10). This adjusting dial is divided and figured for various altitudes from 0 to 2500 feet above sea level. This is rotated until the elevation of the locality in which it is to be used is opposite the arrow on the back of the instrument case.

Having made this altitude correction, no further adjustment is necessary except to set the brass index hand over the black indicating hand. After a few hours observe the direction in which the black hand has moved. If to the left it is "falling"; if to the right it is "rising". If the hand is "rising" the forecast in the outer half of the segment of the dial, immediately underneath the black hand, should be read; if "falling" the forecast in the lower half of the segment, underneath the black hand.

The brass hand, being an index hand, only moves when the knob in the glass is turned, and should be reset over the black hand after each observation.

NO.		EACH
2259	Taylor Stand "Stormoguide"	\$15.00
	Walnut-finish bakelite case and stand; 4½" gold-toned dial; good-grade aneroid movement; adjustable for altitudes from 0 to 2500 feet.	

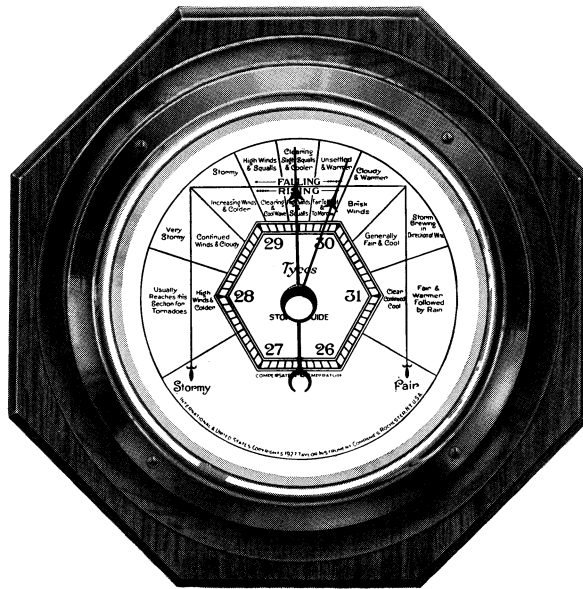


Tycos Bracket "Stormoguides"

The Simplified Barometers

(American Manufacture)

Patent No. 1,107,496



No. 2553

(About two-fifths actual size)

The octagonal frame combined with "Stormoguide" service appeals to the artistic sense, as well as to the appreciation of utility. An ornament to any home or office.

The forecasts on the dial are based on barometer indications at sea-level. To furnish correct readings at any altitude above sea-level a barometer must be adjusted to allow for the effect of the altitude on the mechanism of the instrument. The Tycos "Stormoguide" provides for this by having an altitude plate fitted in its back. To make the adjustment, it is necessary simply to revolve this back plate with the fingers until the arrow engraved on the back of the case points to the proper altitude for the location in which the instrument is to be used.

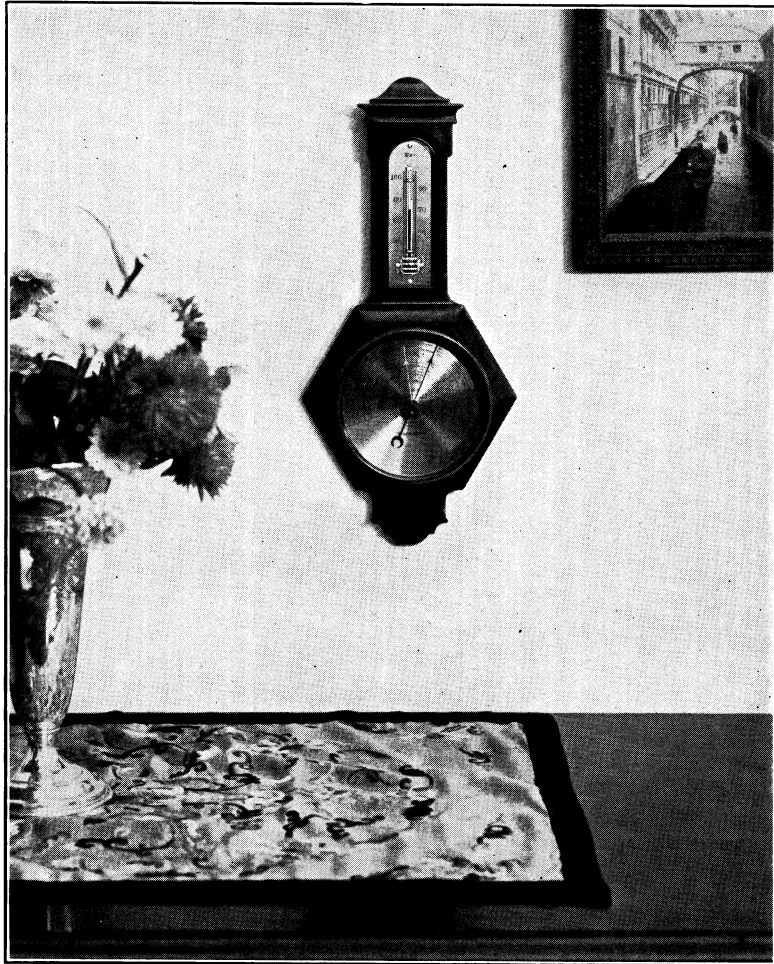
No. 2553 Tycos Bracket "Stormoguide"..... EACH
\$35.00

Hand-rubbed satin-finished mahogany frame, 7³/₄" diameter; antique-finished bezel to match the frame; movement compensated for temperature changes; etched 5" silvered-metal dial; sheet-glass crystal; for altitudes 0 to 3,500 feet. Each in a cardboard box. Weight about 3 pounds 5 ounces.



Taylor Pendant "Stormoguide"

The Home Weather Advisor
(American Manufacture)



No. 2260 in use
(About one-sixth actual size)

Both weather service and beauty are found in this "Stormoguide," one that will add to as well as blend with almost any style of furnishing.

Housed in a handsome molded bakelite frame, with revolving altitude adjustment feature, same as in the more expensive instruments.

NO. **2260W** Taylor Pendant "Stormoguide," Walnut-Finish Frame **\$18.00** EACH

The Barometer has a brushed-brass easy-reading dial; good-grade movement; adjustment for use in altitudes from 0 to 2500 feet. The thermometer has a brass scale and magnifying glass tube filled with non-fading easy-reading red liquid. Size 14 inches by 6 1/4 inches. Weight about 2 pounds.

2260M Taylor Pendant "Stormoguide," Mahogany-Finish Case **18.00**

Same as No. 2260W, except mahogany-finish case.

Taylor Pendant "Stormoguides"

(American Manufacture)

The Simplified Barometers



No. 2420



No. 2421

(Illustrations about one-fourth actual size)

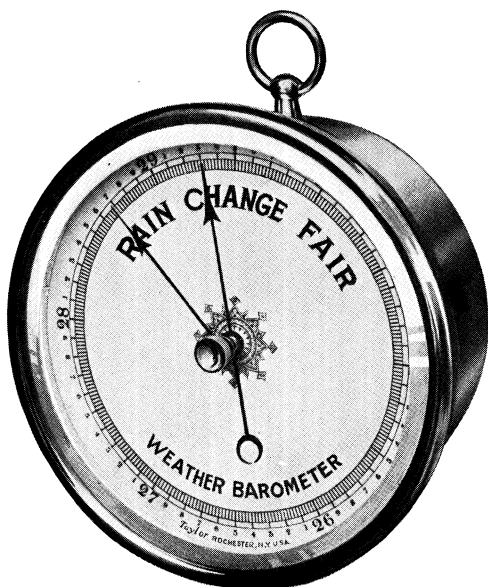
In design these Pendant "Stormoguides" are the finest ever offered to the trade. These beautiful instruments harmonize with any interior decorations or finish.

- | | | |
|----------|--|------------------------|
| No. 2420 | Taylor Pendant "Stormoguide" | EACH
\$25.00 |
| | Moulded wood case (8" x 19 3/4") finished in antique gold, with 4 1/2" dial and bezel to match; good-grade movement; for altitudes 0 to 2500 ft. | |
| No. 2421 | Taylor Pendant "Stormoguide" | 25.00 |
| | Moulded wood case (7 1/4" x 21 3/4") finished in antique gold, with 4 1/2" dial and bezel to match; good-grade movement; for altitudes 0 to 2500 ft. | |

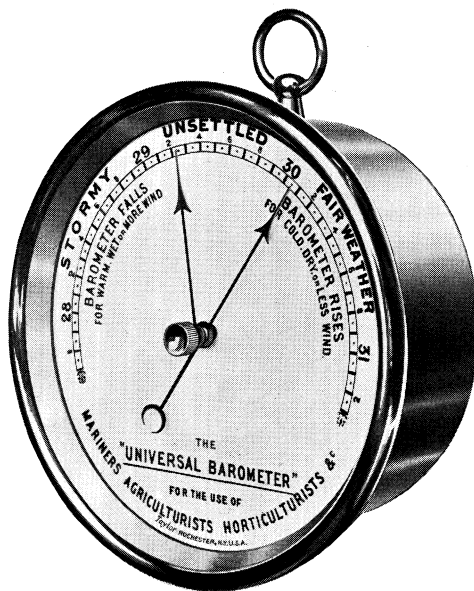


Taylor Brass-Case Aneroid Barometers

(American Manufacture)



No. 2200



No. 2224

(Illustrations about one-half actual size)

No. 2200 *Taylor* Brass-Case Aneroid Barometer **EACH \$12.00**

Lacquered-brass case, 5-inches in diameter; sheet-glass crystal; good-grade movement; closed, moisture-proof, untarnishable enameled dial. Each in a cardboard box. Weight 22 ounces.

No. 2202 Same as No. 2200, except better-grade movement finished in brass lacquer, and with open-center enameled metal dial **13.50**

NOTE—Either of above will be supplied if specified, at no extra charge, with dials engraved with metric scale in addition to inch scale, and without weather words; or with metric scale only, and in addition the weather words in Spanish.

Taylor "Universal" Pattern

These barometers have been designed and constructed to combine strength, attractiveness and efficiency, at a price within the reach of everyone. The weather readings on the dial are understandable even to the amateur, and the "Universal" is especially popular with agriculturists, mariners and fishermen. They are thoroughly sound, reliable instruments, at an attractive price.

No. 2224 *Taylor* "Universal"-Pattern Aneroid Barometer **EACH \$15.00**

Lacquered-brass case 5 inches in diameter; closed enameled dial, unaffected by dampness; good-grade movement; sheet-glass crystal. Each in a cardboard box. Weight 22 ounces.

NOTE—It is not necessary to expose barometers out of doors to get the best results. They should be kept in the house and in a place where the temperature remains fairly uniform.

(Page 18 for "*Tyco's* Patented Folding Feet.")

(Page 18 for Barometer Instruction Chart and Weather Record.)

(Page 37 for booklet "*Practical Hints for the Amateur Weather Forecaster.*")



Tycos Special Brass-Case Aneroid Barometers

(American Manufacture)

Compensated for Temperature

As Supplied to U. S. Navy, U. S. Weather Bureau, U. S. Bureau of Plant Industry, etc.



No. 2250
(About one-half actual size)

To be absolutely accurate a barometer must of necessity be compensated for temperature. Some years ago we developed the No. 2250 type of aneroid barometer, and it has been supplied since to the U. S. Navy and the U. S. Weather Bureau, besides many scientific and educational institutions throughout the country.

As at present constructed the movement is practically non-corrosive, steel parts having been replaced where practicable with either nickel-silver or phosphor-bronze.

No. 2250-5" *Tycos* Special Brass-Case Aneroid Barometer EACH \$20.00

Lacquered-brass case, 5 inches in diameter; sheet-glass crystal; open-center silvered-metal dial, divided with great accuracy. The movement is extra grade, compensated for temperature changes, thus insuring at all times accurate readings of barometric pressure. Each in a cardboard box. Weight 24 ounces.

NOTE—No. 2250 in the 5-inch size only will be supplied if so specified, at no extra charge, with dial engraved in the metric scale and with weather words in Spanish, or with metric scale in addition to the inch scale and without weather words.

No. 2250-6" Same as above, except 6-inches in diameter. 25.00

No. 2250T-5" *Tycos* Special Brass-Case Aneroid Barometer with Curved Thermometer 21.50

Same as No. 2250-5", except that the lower part of the barometer scale is omitted and a curved thermometer is mounted on the dial, with both Centigrade and Fahrenheit temperature scales.

(Page 18 for "*Tycos* Patented Folding Feet.")



Tycos and Taylor Special Brass-Case Aneroid Barometers

(American Manufacture)

Arranged for High Altitudes



No. 2250²³/₂₀
(About one-half actual size)

The aneroid barometers listed on pages 14 and 15 are suitable for use at or near sea level.

The following instruments should be ordered for altitudes from 2,000 to 10,600 feet. They have no weather words.

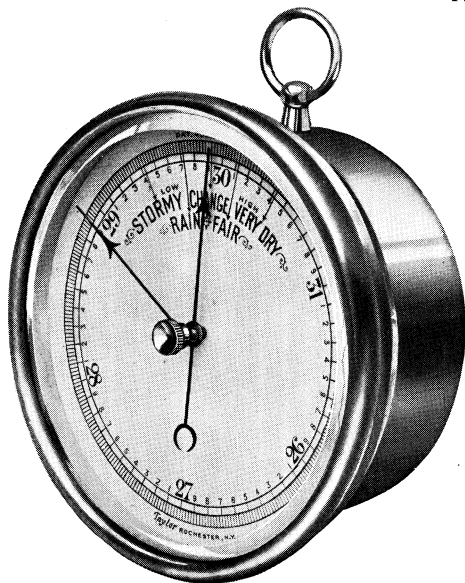
- | | | |
|--|---|------------------------|
| No. 2250 ²³ / ₂₀ | <i>Tycos</i> Special Brass-Case Aneroid Barometer..... | EACH
\$25.00 |
| | Lacquered-brass case, 5 inches in diameter; sheet-glass crystal; first-quality compensated movement; finely-divided-and-figured open-center silvered-metal dial. Good for use at altitudes from 2,000 to 7,100 feet. Each in a cardboard box. Weight 24 ounces. | |
| No. 2253 | Same as No. 2250 ²³ / ₂₀ , except dial furnished with inch-and-metric scale | 25.00 |
| No. 2250 ²⁰ / ₂₆ | Same as No. 2250 ²³ / ₂₀ , except for use at altitudes from 4,800 feet to 10,600 feet | 25.00 |
| | NOTE—Nos. 2250 ²³ / ₂₀ and 2250 ²⁰ / ₂₆ are of special design, being first-grade throughout and compensated for changes of temperature. | |
| No. 2202 ²³ / ₂₀ | <i>Taylor</i> Special Brass-Case Aneroid Barometer..... | 18.00 |
| | Lacquered-brass case, 5 inches in diameter; sheet-glass crystal; open-center enameled-metal dial; good-grade movement finished in brass lacquer. Is good for use at altitudes from 2,000 to 7,100 feet. Each in a cardboard box. Weight 24 ounces. | |
| No. 2202 ²¹ / ₂₇ | Same as No. 2202 ²³ / ₂₀ , except good for use between 3,600 feet and 9,500 feet... | 18.00 |
| | NOTE—Movements of the Nos. 2202 ²³ / ₂₀ and 2202 ²¹ / ₂₇ are of good quality, and except for their special construction for high altitude are identical with No. 2202, (page 14). | |

(Page 18 for "*Tycos* Patented Folding Feet".)

Taylor Brass-Case Aneroid Barometers With Revolving Back

Adjustable for any Altitude up to and Including 7,000 Feet
(American Manufacture)

Patent No. 1,107,496



(Front View)



(Back View)

No. 2252

(Illustrations about one-half actual size)

An altitude adjustment is made, whereby the barometer hand points directly to the approximate weather mark and the weather is foretold at a glance.

It is necessary to arrange all "weather words" on aneroid barometers in relation to the barometric pressure scale at sea level, in order to fix a standard level for observation.

Since barometric readings are affected by altitude, and it obviously is impossible because of the enormous variety involved to make special instruments for various altitudes from sea level upwards, the desirable barometer is one provided with a means of adjustment, whereby the observer may at any desired location take observations agreeing with sea-level readings.

The instruments are so arranged as to be suitable for use in any location from sea level to 7,000 feet elevation. The adjustment is very simple and no derangement of the working parts is necessary. Once adjusted by the observer for a given location, no further adjustment is required until the barometer is taken to another location.

Turn the black plate set in the back of the case (this is easily done with the fingers) until the number corresponding with the elevation of the city or town is opposite the arrow on the case. The hand will then point to the proper weather mark and the reading will be the same as that of the U. S. Weather Bureau, which is sea-level reading.

No. 2252 Taylor Brass-Case Aneroid Barometer **EACH \$18.00**

Lacquered-brass case, 5 inches in diameter; sheet-glass crystal; closed enameled-metal dial; good-grade movement; for use at altitudes from 0 to 3,500 feet. Each in a cardboard box. Weight 24 ounces.

No. 2252½ Same as No. 2252, except for use at altitudes from 3,500 to 7,000 feet **21.00**

NOTE—No. 2252 can be furnished with dials figured with metric scale in addition to the inch scale, without weather words, and instructions in Spanish on the back adjusting plate.

(Page 18 for "Tyco's Patented Folding Feet.")



Feet for *Tycos* and *Taylor* Brass-Case Aneroid Barometers

Procurable on American-Made Barometers only

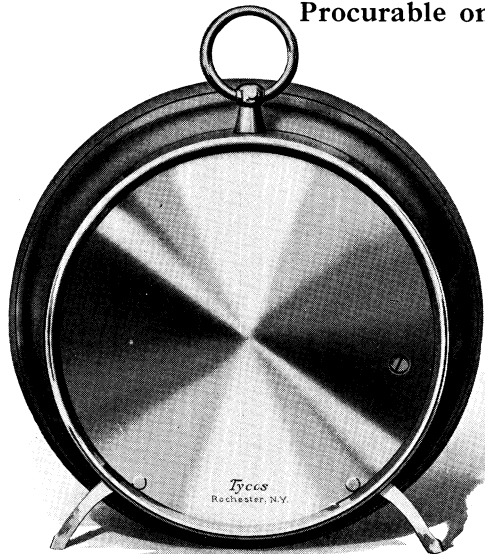


Fig. 1
(Feet in use).



Fig. 2
(Feet folded in case).

(Illustrations about one-half actual size)

There have been many requests for the addition of feet to our weather barometers, so the instruments will stand on a table, desk, bureau, or mantel.

On account of the admitted ugliness of feet formerly fitted to barometers, we have designed and patented a type which can be folded back into the case when not in use.

It is obvious that these legs are a decided improvement over those which permanently protrude from the case, for when they are not in use the instrument has a pleasing, symmetrical appearance when hung on the wall.

If ordinary care is exercised, delicately-polished surfaces will not be scratched by the feet.

DESCRIPTIVE LETTER	EXTRA PER SET
"X" <i>Tycos</i> Patented Folding Feet.....	\$1.00

As an extra for any barometer in the 5-inch size, listed on pages 14 to 17.

Tycos Aneroid-Barometer Instruction Chart and *Tycos* Meteorological Register

The words "rain," "fair," "changeable," "stormy," etc., on the dial of an aneroid barometer are apt to be misleading without a nearer knowledge of the comparative relations between the indications of the barometer and thermometer, the direction of the wind, etc. This information is given in a semi-automatic manner by the use of the *Tycos* Chart, simplified sufficiently for the average layman to master readily.

No. 4051 <i>Tycos</i> Instruction Chart.....	EACH \$.75
For aneroid barometers. Size 5½ inches by 5½ inches.	
No. 4052 <i>Tycos</i> Meteorological Register Pad.....	1.00
For keeping record for one year of barometer, thermometer, humidity, rainfall, and wind direction. Complete, with pencil. Size 9 inches by 5½ inches.	

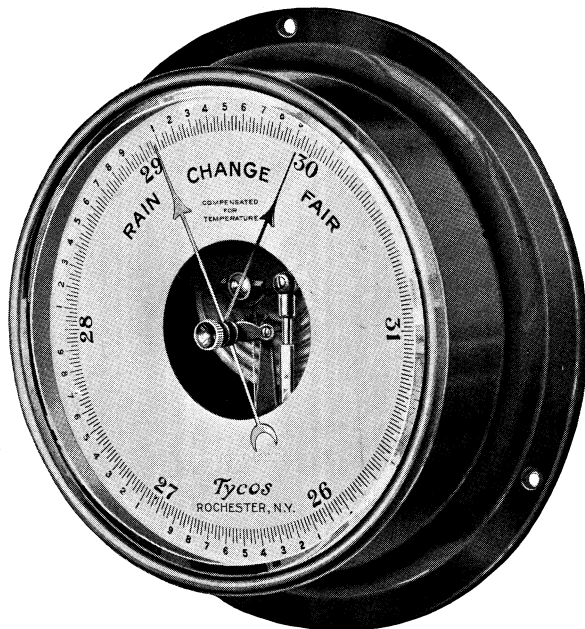
(Page 37 for Booklets on Weather.)



Tycos and Taylor Yacht or Engine-Room Barometers

(American Manufacture)

Pattern Adopted by U. S. Shipping Board



No. 2230APL
(About one-half actual size)

The ideal barometer for almost any purpose where weather readings are of consequence. Simpler to use than the mercurial barometer, because no corrections are necessary. The movement is compensated for temperature changes, specially adjusted and rated, and is of the same grade as those supplied to the U. S. Navy and the U. S. Weather Bureau.

The flanged case gives the instrument a finished appearance and is drilled for easy fitting to a wall, cabin or instrument board.

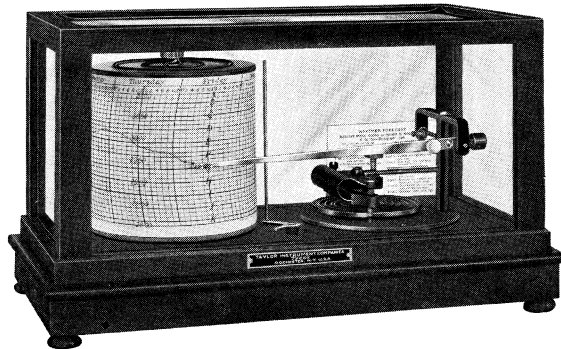
- | | |
|--|---|
| <p>No. 2230APL-5" <i>Tycos</i> Yacht, or Engine-Room Barometer.....</p> <p>No. 2230APL-6" Same as No. 2230APL-5", except case 6 inches in diameter, 2½ inches deep; back-flange is 8" in diameter. Weight 46 ounces.....</p> <p>No. 2230L-5" <i>Taylor</i> Yacht or Engine-Room Barometer.....</p> | <p>EACH</p> <p>\$27.00</p> <p>30.00</p> <p>20.00</p> |
|--|---|
- Lacquered heavy-spun-brass case, 5 inches in diameter, 2¾ inches deep; drilled back-flange is 6⅝ inches in diameter; sheet-glass crystal. Open-center silvered-metal dial, divided to 0.02 of an inch, ranged 25 inches to 31 inches. Movement is compensated for temperature. Weight 34 ounces.
- Lacquered heavy-spun-brass case, 5 inches in diameter, 2¾ inches deep; drilled back-flange is 6⅝-inches in diameter; sheet-glass crystal; open-center silvered-metal dial, good-grade movement, not compensated for temperature. Weight 34 ounces.



Tycos "Cyclo-Stormographs"

Automatic Weather Forecaster

(American Manufacture)



No. 2314
(About one-fifth actual size)

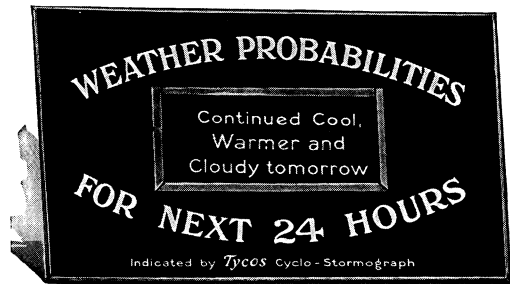
The Tycos "Cyclo-Stormograph" writes tomorrow's weather in ink on a simplified chart—a child can read it. This information as to what weather to expect is of interest to everyone and of real monetary value to many.

Used widely by bankers, yachtsmen, farmers, merchants, and others whose interests need safeguarding by advance weather information.

Displayed in a store window the public will consult it, the store becomes a local weather bureau, and much free newspaper advertising results from its forecasts.

No. 2314 Tycos "Cyclo-Stormograph" (Recording Barometer) **\$75.00**
EACH
Glass-covered mahogany case, size 12½ inches by 7½ inches by 6¾ inches. Complete with forecast cards, year's supply of No. 82 charts, and bottle of ink. For altitudes 0 to 3,500 feet. Weight about 9 pounds.

With each No. 2314 "Cyclo-Stormograph" comes an attractive display card 7½ inches wide by 4½ inches high, made by the carbon-photo process. Pockets on back contain daily forecast cards. The office boy can change them. Look at your "Cyclo-Stormograph" and if the pen indicates between "A" and "B" and the tendency is downward, take from the pocket the card stamped "A and B Falling", and place in metal holder on face of display card. It reads:—"Continued cool, warmer and cloudy tomorrow."



No. 2314½ Tycos "Cyclo-Stormograph" (Recording Barometer) **\$85.00**
EACH
Same as No. 2314, except for altitudes 3,500 to 7,000 feet. Complete with year's supply of No. 83 charts, and bottle of ink. Without forecast cards.

Extras

- No. 82 Charts simplified A-B-C, etc., for No. 2314 "Cyclo-Stormograph" (year's supply) . . . **\$3.00**
- No. 83 Charts for No. 2314 or 2314½ "Cyclo-Stormograph" figured from 28 inches to 31 inches only, for use without the forecast cards (year's supply) **3.00**
- No. 96 Forecast cards (illustrated above) for No. 2314 "Cyclo-Stormograph" **2.00**
- Bottle of Ink (plain bottle) **.50**
- Bottle of Ink (stoppered bottle) **1.00**
- Pens **1.00**

NOTE—A pen and bottle of ink should last five years at least.
NOTE—Above instrument can be supplied at no extra charge with charts divided in meters (710 mm. to 790 mm.). It is not in lettered sections. Mention chart 83M when ordering.



Tycos Thermographs (Recording Thermometers)

(Listed on page 22)

To insure entire satisfaction, see that the pen is kept free from dust and dirt. It should be washed in alcohol occasionally.

To be sure of a delicate record, adjust the pressure of the pen arm by means of the thumbscrew provided for this purpose.

If the pen does not mark readily draw a piece of paper carefully through its nibs, to insure a flow of ink. Use only specially-prepared ink — **this is important.**

Wind the clock each time the chart is changed.

Do not tamper with the thermal coil, nor handle it unnecessarily.

Instrument is portable.

Direct-reading movement is extremely simple, durable and accurate, non-rusting and highly sensitive. Changes of $\frac{1}{2}^{\circ}\text{F.}$ are easily discernible.

More sensitive than some mercurial thermometers, and can be carried about without danger of being disarranged.

Charts showing a variety of ranges can be secured to suit individual requirements. Standard charts are listed on page 22. As three of these charts show ranges of temperature equal to 100° Fahrenheit, they are interchangeable. If for instance, an instrument were fitted with chart No. 85, and it was required to obtain a record of temperature lower than 20° Fahrenheit, which is the minimum range of this chart, it could be accomplished readily by placing chart No. 86 on the recording drum and resetting the instrument. This latter operation is extremely simple.

If the pen arm points at say the 60°F. line on the No. 85 chart at the time the change is made, it is necessary only to remove clamp screw holding pen arm in position on the spindle. The pen arm then will be quite free and can be re-clamped at the 60°F. line on the No. 86 chart. It will not be possible to set it exactly, but after getting it as near as possible any fine adjustment that is necessary can be made by means of the adjusting screw, which will be seen on the other side of the thermal coil.

For the purpose of having a universal range of temperature, instrument No. 2350 can be supplied also with No. 88 chart, ruled but unfigured. This chart can be arranged by the user to cover any reasonable range of temperature covering 100° Fahrenheit. For instance, if used for winter temperatures the chart can be figured from minus 20° to plus 80° Fahrenheit, in the spring from plus 10° to plus 110° Fahrenheit, and in the summer from say plus 40° to plus 140° Fahrenheit, or any range of 100° Fahrenheit desired by the user. When sent this way the instrument is provided with an engraved mercury thermometer for use in setting.

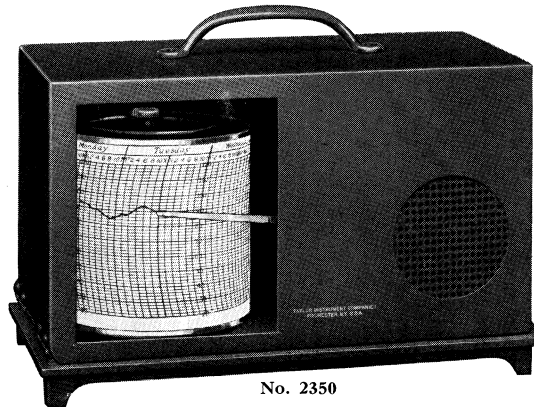


Tycos Thermographs (Recording Thermometers)

(American Manufacture)

(Continued from page 21)

Used by U. S. Department of Agriculture, Canadian Government, the Leading Observatories, and Many Educational Institutions



No. 2350

(About one-fourth actual size)

The *Tycos* Thermograph (Recording Thermometer) is arranged to give on a chart a continuous 7-day ink record of temperature.

This chart is divided into days and two-hour subdivisions of each day. Horizontally the dividing lines are in degrees of temperature.

An arm carrying the recording pen is connected directly to a bimetallic coil, which changes as the temperature rises or falls. This causes the arm, with the recording pen attached, to move vertically over the chart, leaving its record.

No. 2350 *Tycos* Thermograph (Recording Thermometer) **EACH \$70.00**

Gray-enameled metal case, 10¼ inches long, 6⅞ inches high, 5 inches deep; complete with year's supply of charts No. 84 (0° to 100° Faht.), Charts No. 84C, (minus 20° to plus 30° Cent.), charts No. 85 (20° to 120° Faht.) or charts No. 86 (minus 10° to plus 90° Faht.), or with charts No. 88 (below), bottle of ink and full instructions. Weight about 7 pounds.

NOTE—When instrument is used outside, it should be protected against the weather by an adequately-ventilated screen.

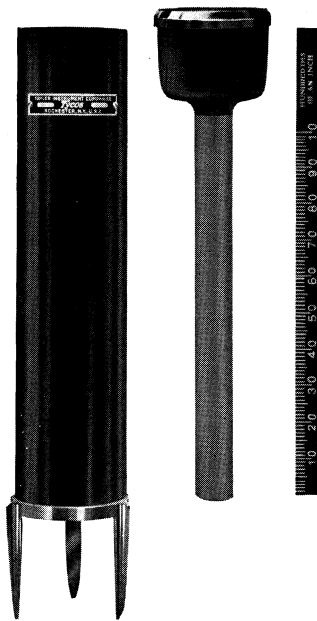
Extras for *Tycos* Thermographs

No. 84	Charts ranged from 0 to plus 100°F., one year's supply.	\$3.50
No. 84C	Charts ranged from minus 20° to plus 30°C., one year's supply.	3.50
No. 85	Charts ranged from plus 20° to plus 120°F., one year's supply.	3.50
No. 86	Charts ranged from minus 10° to plus 90°F., one year's supply.	3.50
No. 88	Charts unfigured, for any range of 100°F. between minus 10° and 200°, one year's supply.	3.50
	Bottle of Ink (plain bottle)50
	Pens.	1.00



Tycos Rain Gauges

(American Manufacture)



No. 2705
(About one-fifth actual size)



No. 2715
(About one-seventh actual size)

The exposure of a rain gauge is of great importance. A position on a fairly level piece of ground in an open lot, unobstructed by large trees, buildings, or fences, is an ideal one. The gauge should be sunk slightly, or supported at the sides by staves, to prevent its being blown over in a high wind. It is essential that when in use the top of the gauge be exactly level.

No. 2705 *Tycos* Rain Gauge EACH \$12.00

Blue-bronzed-metal cylinder 13½ inches high, with brass rim three inches in diameter inside; three pointed feet three inches long, which when forced into the ground hold the gauge upright. Care in manufacture makes this a most satisfactory instrument. Has two graduated measuring sticks to show from .01 to 1.0 inch of rainfall. Each in a special felt-lined shipping container. Weight about 5 pounds.

No. 2715 *Tycos* Glaisher's Rain Gauge 20.00

Originally designed by Mr. James Glaisher, Fellow of the Royal Society.

Japanned-metal receiver with 8-inch-diameter funnel with brass rim, terminating in a curved tube, which, retaining a small portion of water, prevents evaporation. Complete with metal cup and graduated measuring glass showing from .01 to .50 of an inch of rainfall. Weight about 5 pounds.

NOTE—The receiver being sunk into the ground to within eight inches of the top, no evaporation will take place even in the warmest season.

No. 2716 Same as No. 2715, except copper with brass rim 26.00

NOTE—Care must be taken after pouring the rain from the gauge to the graduated measure, to hold the measure quite vertical, or an inaccurate reading will result.

NOTE—Such small amounts of water as are deposited in the gauge by dew, hoarfrost and fog should be taken into account also when calculating the total precipitation for a given period.

Measuring Glasses

Extra graduated measuring glasses reading from .01 inch to .50 inch of rainfall, for Nos. 2715 and 2716 EACH \$3.00



Taylor-Quality Compasses

The Nationally-Advertised Line

(American Manufacture)

Taylor-Quality Compasses are the result of years of study and research in a factory with more than half a century's experience in the manufacture of meteorological instruments, and with every possible device for the improvement of the product.

All Taylor-Quality Compasses are so constructed that they can be repaired easily when broken, which is not the case with other makes. There is no loss from damaged stock.

All compasses listed on pages 25 to 31 are packed in attractive individual folding boxes, and either six or twelve in a carton, as stated in specifications where each compass is listed.

Taylor-Quality Compass Assortment



ACTUAL SIZE OF TRAY 8" WIDE BY 7 1/2" HIGH

No. 2909 Assortment
(About one-third actual size)

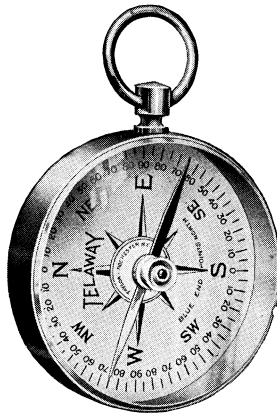
No. 2909 Taylor Compass Assortment..... EACH \$23.00

Consists of one each Leedawl, Magnapole, Flodial, Litenite, Gydawl, Aurapole, Meradial and Ceebynite Compass, packed in a velvet-lined easel-back tray of extra quality, lettered in gold. The tray can be used for counter, window or showcase display, offering at sight an exceptionally fine line of compasses, and drawing attention of the public to a complete line, whereas if the compasses were exposed for sale in the usual haphazard way, they might be passed unnoticed.



Taylor-Quality Compasses

(American Manufacture)



No. 2905
(Actual size)

The "Telaway" Compass

The insistent demand for a good compass at a reasonable price prompted us to put the "Telaway" on the market.

We feel that it is exceptional value, and it has many features not to be found in compasses costing twice as much.

The case is of black-bronzed brass and is fitted with a ring at the top, for fastening to a chain or guard.

The dial is of heavy enameled card, accurately divided, and figured at the principal cardinal points.

Needle is of flat design, the north-pointing end being blued. A jeweled center insures perfect accuracy of movement.

The beveled crystal glass fits into the case in the same way as the crystal of a watch. This means that should the glass break, or the needle need repairing, or anything whatever go wrong with the "Telaway," it can be repaired readily. Of all cheap compasses the "Telaway" has this feature exclusively.

No. 2905 Taylor "Telaway" Compass PER DOZ. **\$9.00**

Black-bronzed-brass case fitted with ring for attaching chain; heavy enameled-card dial accurately divided; flat needle; jeweled center; beveled glass crystal. Weight $\frac{3}{4}$ of an ounce.

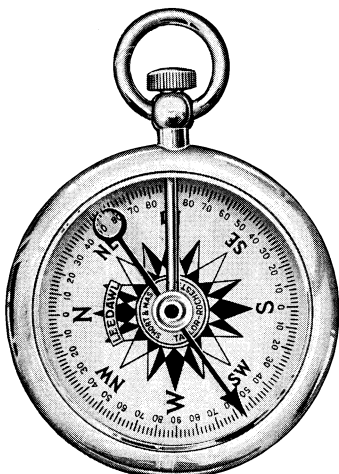
Packed each in a folding box; 12 in a carton.

(Page 37 for booklet, "The Compass, the Signpost of the World.")

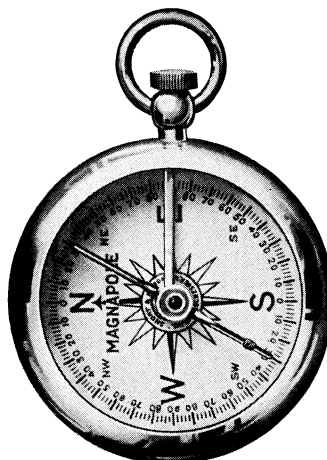


Taylor-Quality Compasses

(American Manufacture)



No. 2910



No. 2911

PATENTED
APRIL 20, 1915
JANUARY 8, 1918

(Illustrations actual size)

The "Leedawl" Compass

The "Leedawl" Compass has been put on the market to meet the ever-growing demand for a good, reliable, properly manufactured, attractive, accurate and sensitive pocket compass, at a reasonable price.

The "Leedawl" is mounted in an untarnishable white-metal case (not plated) has an untarnishable silvered-metal dial, hardened and tempered steel point, and cupped jewel bearing. The stop for lifting the needle off its center when compass is not in use, is made to prevent dust getting inside the instrument, besides making it practically water-tight.

The beveled glass crystal is made to snap in, a most desirable feature, since it can be removed easily when the working parts need to be repaired or cleaned.

No. 2910 Taylor "Leedawl" Compass **PER DOZ. \$15.00**
White-metal case; beveled glass crystal; jeweled needle with stop; untarnishable silvered-metal dial; cupped jewel bearing. Packed each in a neat box, 12 in a carton.

The "Magnapole" Compass

The case design and the stop mechanism for raising the needle off the point when not in use are essentially the same as in the "Leedawl" Compass, but the dial is of aluminum, much whiter and more easily read than most other types. As aluminum is impervious to moisture and will not discolor, the life of the "Magnapole" dial is practically unlimited.

"Magnapole" needles are of the bar type and have perfectly-jeweled centers. This insures a high degree of sensitiveness, and consequent accuracy.

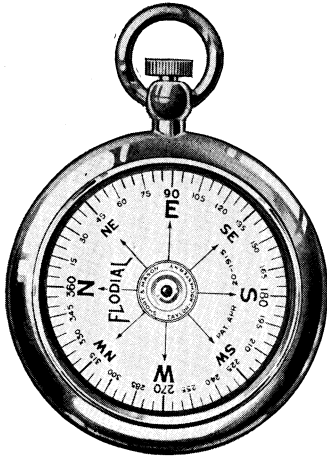
No. 2911 Taylor "Magnapole" Compass **PER DOZ. \$21.00**
White-metal case; beveled glass crystal; aluminum dial; jeweled-center bar needle with stop. Packed each in a neat box, 12 in a carton.

(Page 37 for booklet, "The Compass, the Signpost of the World".)

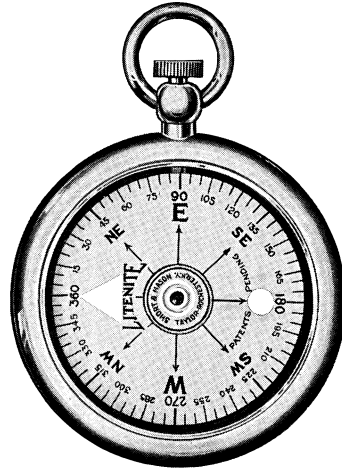


Taylor-Quality Compasses

(American Manufacture)



No. 2912
PATENTED APRIL 20, 1915



No. 2913
PATENTED APRIL 20, 1915

(Illustrations actual size)

The "Flodial" Compass

Mounted in case of same pattern and grade as the "Leedawl" (page 26). Flat magnetic needle attached to under side of aluminum dial, which floats instead of being fixed, making it possible to note all magnetic bearings at once. Center is jeweled, and stop is provided to lock the dial when not in use.

No. 2912 *Taylor* Flodial Compass..... PER DOZ. **\$21.00**

White-metal case with stop; beveled glass crystal; untarnishable floating aluminum dial; cupped jewel center. Packed each in a neat box, 12 in a carton.

The "Litenite" Compass

Same pattern in every respect as the "Flodial", except that the "N" and "S" points of the dial are treated with a luminous compound, so that direction can be seen at night.

No. 2913 *Taylor* "Litenite" Compass..... PER DOZ. **\$24.00**

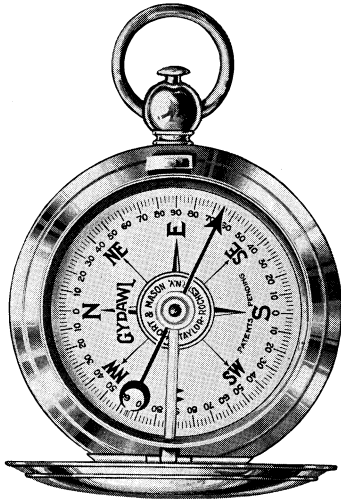
Same as No. 2912, except that the "N" and "S" points are luminous.
Packed each in a neat box, 12 in a carton.

NOTE—Do not "test" the "Litenite" in the daytime for its luminous power. A person's eyes take up light and it requires from 15 to 20 minutes in a dark room to bring them in the day to the condition they are in at night. If you wait this length of time in a dark room, the luminous points will appear quite bright and will increase in luminosity the longer you stay.

(Page 37 for booklet, "The Compass, the Signpost of the World.")



Taylor-Quality Compasses (American Manufacture)



No. 2914

PATENTS PENDING



No. 2915

(Illustrations actual size)

The "Gydawl" Compass

For a low-priced compass in a hunter-style case the "Gydawl" cannot be beaten. The needle is of the flat, half-blued steel type—the same as in the "Leedawl" (*page 26*)—has a jeweled center and a stop which automatically, directly the lid is closed, lifts the needle off the special steel point on which it operates. This means practically everlasting life to the compass, for it always will remain delicate and sensitive as long as the needle is lifted off the center when not in use.

No. 2914 Taylor "Gydawl" Compass.....	PER DOZ. \$42.00
Thin model, white-metal hunter case, strongly hinged; beveled glass crystal; flat half-blued steel needle with jeweled center; automatic stop lift; untarnishable silvered-metal dial. Packed each in an attractive box, six in a carton.	

The "Aurapole" Compass

In the selection of a compass many people prefer styles having needles of "bar" pattern to those of flat design, as used in the "Gydawl" (*above*) and "Leedawl" (*page 26*). Bar needles are to be preferred:—first, on account of their extreme sensitiveness; secondly, because they can be magnetized much more strongly; and thirdly because they retain their magnetism indefinitely.

The needle of the "Aurapole" is heavily magnetized, delicately balanced, and extremely sensitive. Center is jeweled and a stop lifts the needle off center point when lid of case is closed. Dial is of aluminum.

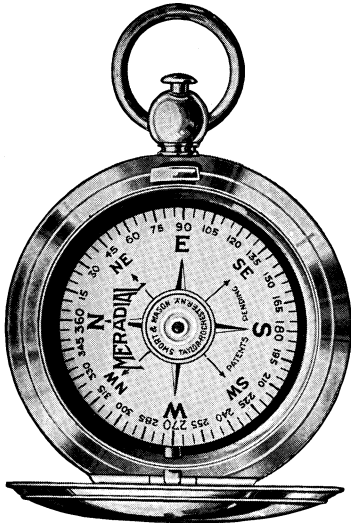
No. 2915 Taylor "Aurapole" Compass.....	PER DOZ. \$48.00
Thin-model, white-metal hunter case, strongly hinged; beveled glass crystal; bar needle with jeweled center; automatic stop lift; untarnishable aluminum dial. Packed each in an attractive box, six in a carton.	

(Page 37 for booklet, "The Compass, the Signpost of the World.")



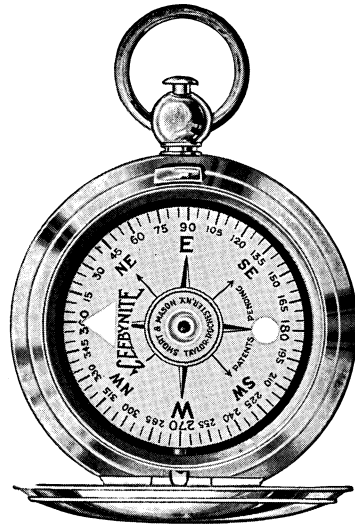
Taylor-Quality Compasses

(American Manufacture)



No. 2916

PATENTS PENDING



No. 2917

(Illustrations actual size)

The "Meradial" Compass

Floating-dial compasses are very popular with hunters and those who spend a good deal of time in the woods. Technically speaking they are the most satisfactory of all compasses, as the dials are fitted to the needles and float with them.

Their advantage over "needle" compasses is obvious. When the dial comes to rest it gives all magnetic directions accurately.

When case is closed the dial is lifted off the jeweled center point.

No. 2916 Taylor "Meradial" Compass **PER DOZ. \$48.00**
Thin-model, white-metal hunter case, strongly hinged; beveled glass crystal; floating aluminum dial; cupped jewel center; automatic stop lift. Packed each in an attractive box, six in a carton.

The "Ceebynite" Compass

Supplied to Canadian and U. S. Armies

The North and South points of the floating dial of the "Ceebynite" Compass are treated with a radioactive luminous compound which enables them to be seen at night. The action of this material is such that it does not have to be exposed to sunlight during the day to make it phosphorescent at night, as is the case with other compounds.

In all other respects the same as the "Meradial."

No. 2917 Taylor "Ceebynite" Compass **PER DOZ. \$54.00**
Thin-model, white-metal hunter case, strongly hinged; beveled glass crystal; floating aluminum dial with luminous points; cupped jewel center; automatic stop lift. Packed each in an attractive box, six in a carton.

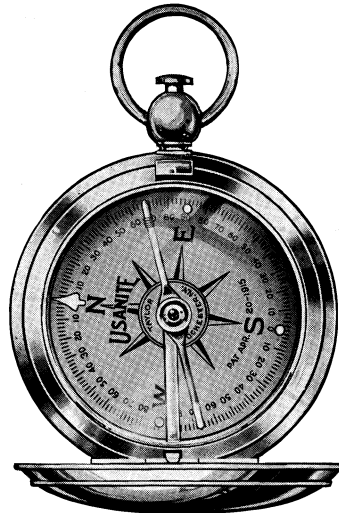
NOTE—Do not "test" the "Ceebynite" in the daytime for its luminous power. A person's eyes take up light and it requires from 15 to 20 minutes in a dark room to bring them in the day to the condition they are in at night. If you wait this length of time in a dark room, the luminous points will appear quite bright and will increase in luminosity the longer you stay.

(Page 37 for booklet, "The Compass, the Signpost of the World.")



Taylor-Quality Compasses

(American Manufacture)



No. 2918
(Actual size)

The "Usanite" Compass

As supplied to the U. S. Army

The "Usanite" was designed for people who prefer needle-style compasses to those with floating dials.

The north-pointing end of the needle is covered almost completely with radium material, while a smaller portion is applied to the south-pointing end.

The cardinal points (N., E., S. and W.) of the compass dial are similarly prepared, the N. point being distinguished by an arrow head, and the other three points by dots.

No. 2918 Taylor "Usanite" Compass	PER DOZ. \$48.00
---	----------------------------

Thin-model, white-metal hunter case, strongly hinged; beveled glass crystal; automatic stop lift; silvered-metal dial; jeweled-center bar needle with luminous points. Packed each in an attractive box, six in a carton.

NOTE—Do not test the "Usanite" in the daytime for its luminous power. A person's eyes take up light and it requires from 15 to 20 minutes in a dark room to bring them in the day to the condition they are in at night. If you wait this length of time in a dark room, the luminous points will appear quite bright and will increase in luminosity the longer you stay.

(Page 37 for booklet, "The Compass, the Signpost of the World.")



The *Taylor* Official Boy-Scout Compass

(American Manufacture)

Licensed Official Compass—Boy Scouts of America



No. 2919
(Actual size)

In order to meet the specific needs in a compass for boy scouts, this special model has been devised.

Taylor Boy Scout compass No. 2919 is fitted with bar needle, official Boy Scout insignia on aluminum dial, case finished in olive drab. This compass has received the endorsement of the Boy Scout organization.

The market for this compass is very large and every Boy Scout should carry the official compass as part of his equipment.

No. 2919 *Taylor* Official Boy Scout Compass.....**\$39.00**

PER DOZ.

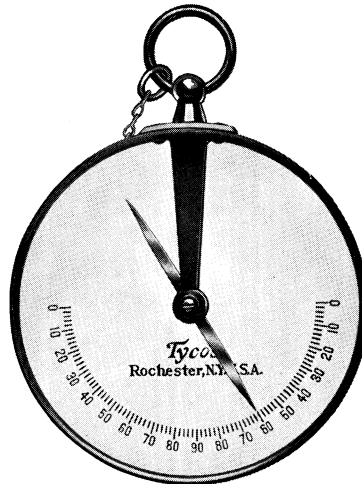
Hunter case, finished in olive drab; bar needle with aluminum dial and official Boy Scout insignia.

Packed each in individual box, 12 in carton.



Tycos Dipping Needle

(American Manufacture)



No. 2975

(About one-half actual size)

The *Tycos* Dipping Needle has been developed for use in locating accurately and quickly iron box covers and pipe lines (water, gas, etc.) which are buried out of sight. Water-works and gas-works employees find these instruments of great value, and use them daily. They should be a part of every outfit.

The point at which the needle assumes the greatest angle of declination from the horizontal will indicate closely the location of the box or pipe-line.

As a Dipping Needle, or Miner's Compass, this instrument is a guide in the discovery and location of magnetic iron ore. When used for this purpose the observer should take into consideration the local magnetic dip, as well as the general geological formation. This will aid him in telling the approximate depth and mass of the iron ore being traced.

THE DIPPING NEEDLE WILL NOT INDICATE THE PRESENCE OF NON-MAGNETIC METALS.

No. 2975 *Tycos* Dipping Needle EACH **\$12.00**

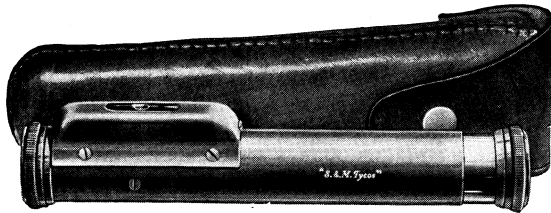
Strong, dull-black metal case with "pull-off" cover; accurately-divided white-metal dial with black figures; magnetic needle poised in jeweled bearings, with stop to prevent needle from swinging when not in use, eliminates breakage. In cloth bag. Weight about 9-ounces.



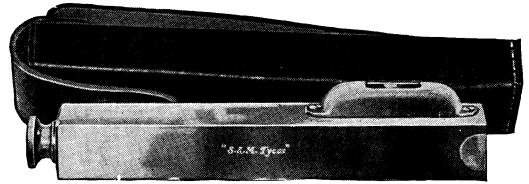
Tycos Improved Pocket Reflecting Prism Levels

(American Manufacture)

As supplied to U. S. Geological Survey, U. S. Forest Service, U. S. Reclamation Service, Bureau of Mines, etc.



No. 3020



No. 3022

(Illustrations about one-half actual size)

Round Reflecting Level With Prism and Magnifier; Sliding Eyepiece

This simple portable level consists of a tube five inches long, having a sliding eyepiece, and a glass spirit level on top near the objective end, as shown. Beneath the spirit level there is an opening in the tube, through which the bubble can be seen, as reflected by a prism immediately under the level vial.

At the inner end of the sliding eyepiece is a semicircular magnifying lens, which serves to magnify the level bubble. By sliding the eyepiece the bubble can be perfectly focused, and the distant object can be seen clearly through the open half of the tube.

A cross wire is also placed in the tube, the instrument being elevated or depressed at the objective end until the bubble is bisected by the cross wire. The correct level is then obtained. Protecting glasses to exclude dust are fixed at both ends.

When used for approximate leveling purposes the observer should stand in a fixed position, having a view of the piece of land to be levelled. An assistant, with a staff having a distinct mark upon it at the height of the observer's eye, can be moved about to different parts of the ground, the observer noting at each spot the difference of level (if any) above or below the mark upon the staff, or a stake can be driven into the ground, the correct height at the points observed. For leveling upon a long course, the observer would move short distances, by a tape measure, noting the difference of level at each station, and the contour made on paper.

No. 3020	<i>Tycos</i> Pocket Reflecting Prism Level	EACH \$10.00
	Round bronzed-metal case, 5 inches long; in leather case. Weight 4½ ounces.	
No. 3021	Same as No. 3020, except in nickel-plated case	12.00

Square Reflecting Level No Prism or Magnifier; Fixed Eyepiece

No. 3022	<i>Tycos</i> Pocket Reflecting Level	EACH \$7.50
	Square bronzed-metal case, 5 inches long. In leather case. Weight 2½ ounces.	



Tycos Biram's Jeweled Zero-Setting Anemometers

(American Manufacture)

As supplied to U. S. Department of Agriculture, U. S. Bureau of Mines,
U. S. Naval Academy, etc.



No. 3132
(About two-thirds actual size)

For registering the velocity of currents of air in mines, tunnels, flues of furnaces, etc., by means of a light fan the revolutions of which are recorded on dials in the center of the instrument.

No. 3132 Tycos Biram's Anemometer.....	EACH \$45.00
--	------------------------

Jeweled bearing, fitted with our patented, instantaneous zero-setting arrangement; 4-inches in diameter; 4 silvered-metal dials reading to 100,000 feet. Weight 16 ounces. Each instrument is tested and a chart of corrections furnished for velocities from 200 to 3000 feet per minute. Furnished in cardboard carrying case.

DESCRIPTIVE
LETTER

"L" Sole-Leather Case for No. 3132	EXTRA \$6.50
--	------------------------

Directions for Use

The Tycos Anemometer should be placed in the air channel, all hands having been set at zero by the instantaneous method, a special feature of this instrument. The stop lever then can be moved, and the instrument will start registering. At the end of one or five minutes, or any other period fixed for the test, move the stop lever and note the reading.

The reading will be the number of LINEAR feet of air that have passed the instrument during the period of observation. To obtain the number of CUBIC feet of air that have passed the anemometer, the number of linear feet should be multiplied by the area of the channel.

In making tests it is desirable to place the anemometer in several positions, always with the dial facing in the SAME DIRECTION as the current, i.e. so that the air passes through the instrument from back to front and not from front to back. By adding the various readings obtained and dividing by the number of tests a mean reading is obtained.



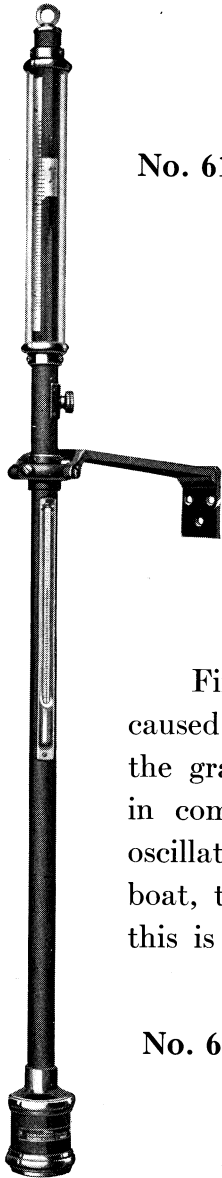
Tycos Mercurial Barometers

Observatory Type

(American Manufacture)

No. 6180 *Tycos* Observatory-Type Mercurial Barometer PRICE ON APPLICATION

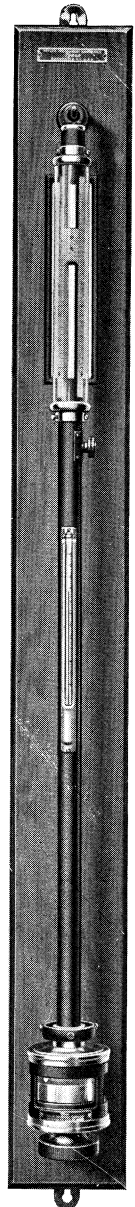
Over-all length 39 inches; scale range 26 to 31 inches; inch-and-metric scale with double vernier, reading to $\frac{1}{100}$ of an inch and $\frac{1}{10}$ mm; glass cover protects the scale; improved design of cistern makes it impossible for air to get into the tube in transit; black-oxidized brass stem; silvered scales with black-filled figures and graduations. Weight about $9\frac{3}{4}$ pounds. No panel with this instrument.



No. 6185
(About one-sixth actual size)

No. 6180G *Tycos* Observatory-Type Mercurial Barometer PRICE ON APPLICATION

Same as No. 6180, except mounted on mahogany-finished panel (as illustrated). Size of panel 4 inches by 44 inches.



No. 6180-G
(About one-seventh actual size)

Extras

- "A"—Range for Altitudes up to 5,000 feet PRICE ON APPLICATION
- "B"—Range for Altitudes up to 8,000 feet PRICE ON APPLICATION
- "G"—Mahogany Panel only, for No. 6180 Mercurial Barometer. PRICE ON APPLICATION

Marine Type

Fixed cistern, without zero adjustment. The deviation caused by a rising or falling column is compensated for in the graduation of the scale. Each instrument is pointed in comparison with a standard barometer. To prevent oscillation of the mercury column from the motion of the boat, the lower end of the tube is contracted, and below this is a chamber to prevent small particles of air rising.

No. 6185 *Tycos* Marine Barometer (best grade) PRICE ON APPLICATION

Inch scale, 26 inches to 31 inches, $\frac{1}{10}$ -inch divisions, vernier reading to $\frac{1}{100}$ -inch; $\frac{1}{4}$ -inch-bore barometer tube; black-oxidized-finish brass stem; nickel-silver-scale and vernier, with black-filled figures; Fahrenheit scale engraved thermometer mounted on stem; gimbal arm for attaching; over-all length 38 inches. Each in a carrying box. Weight about 10 pounds.



Mercurial Barometers

(American Manufacture)

For Schools and Colleges

No. 6190 Taylor Improved Barometer for Schools and Colleges (*medium grade*) PRICE ON APPLICATION

For use in altitudes from sea level to 3,000 feet; double scale: (inch scale, 25 inches to 32 inches, $\frac{1}{10}$ -inch divisions, vernier reading to $\frac{1}{100}$ -inch; metric scale, 64 cm. to 81 cm., $\frac{1}{10}$ cm. divisions, vernier reading to $\frac{1}{10}$ mm); $\frac{1}{8}$ -inch-bore barometer tube; black-oxidized-finish scale and vernier, with white-filled figures; sliding scale to allow for changing level of mercury in the cistern; screw attachment for blocking the mercury; mounted on oak board with F.-and-C.-Scale Thermometer; over-all length, 39 inches. Each in a box. Weight about $2\frac{3}{4}$ pounds.

Extra Tube for No. 6190, filled with mercury, *with* screw stopper PRICE ON APPLICATION

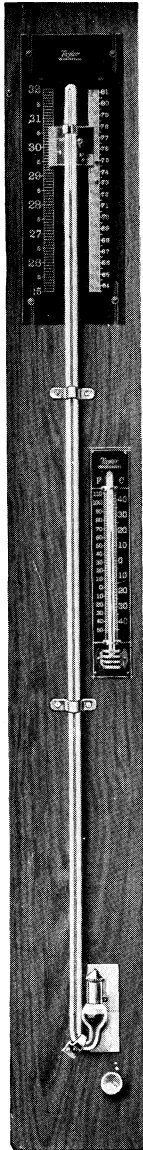
Extra Tube for No. 6190, filled with mercury, *without* screw stopper PRICE ON APPLICATION

Library Barometer

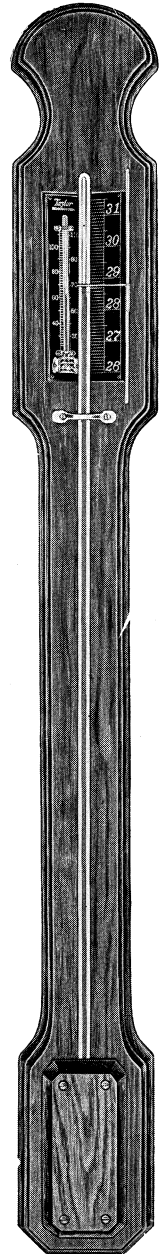
No. 6196 Library Barometer (*ordinary grade*) PRICE ON APPLICATION

Inch scale, 26 inches to 31 inches, $\frac{1}{10}$ -inch divisions; sliding metal pointer; $\frac{1}{8}$ -inch-bore barometer tube; black-oxidized-finish scale with white-filled figures; mounted on oak board with thermometer; approximate temperature range 10° to 120° F.; length over all 42 inches. Each in a box. Weight about $2\frac{3}{4}$ pounds.

No. 6196A Extra Tubes for No. 6196, filled with mercury PRICE ON APPLICATION



No. 6190
(About one-sixth actual size)



No. 6196
(About one-sixth actual size)



Weather Series for the Amateur

By P. R. Jameson, F. R. Met. Soc., F. R. G. S.

- | | | |
|------------------|---|----------------------------------|
| Booklet A | "Practical Hints for Amateur Weather Forecasters" | NET
PER 100
\$10.00 |
| | Thirty-two pages, illustrated, of information on the care and exposure of barometers, how to set for sea level, effect of temperature on the weather, etc. Scale of winds, general indications and approximate forecasts for the barometer scale, for either rising or falling indications. | |
| Booklet B | "Humidity, Its Effect on Our Health and Comfort" | 10.00 |
| | Twenty-four pages, illustrated, on matters concerning the necessity of correcting present-day inside moisture conditions, which are dangerous to health and deprive us of ordinary comfort. Hygrometer and dew-point tables included in this book. | |
| Booklet C | "The Mountains of Cloudland and Rainfall" | 10.00 |
| | Twenty-four pages, illustrated with different types of clouds and ancient and modern rain gauges. Rainfall is dealt with in a very concise manner. Information given on the variety and speed of clouds, with their elevation. Different kinds of clouds are described, so that it is an easy matter for any observer to recognize them quickly. | |
| Booklet D | "The Thermometer and Its Family Tree" | 10.00 |
| | Twenty-four pages, illustrated with thermometers from the time of their invention to the present day. The history of the birth and development of this instrument is popularly dealt with and the different scales in use on all types are clearly described. The manufacture of thermometers is described in plain language, including the manufacture of the glass from which they are made. | |
| Booklet E | "The Barometer as the Foot-Rule of the Air" | 10.00 |
| | Twenty-four pages, illustrated. An elementary booklet describing the invention of the barometer and the processes it has gone through to bring it to its present status. The air, its density and weight, are simply described, also information as to the correct method of using barometers to measure heights, corrections necessary for absolute readings, and the use of the vernier. | |
| Booklet F | "The Compass, the Signpost of the World" | 10.00 |
| | Twenty-four pages, illustrated. History of the compass, its invention and use, clearly given. A map giving declination of the compass for all parts of the United States is also included. | |
| Book G | "Weather and Weather Instruments" | EACH
NET
\$.75 |
| | Most books on this subject are either so scientific that they are "beyond" the ordinary layman, or so superficial as to be practically useless. "Weather" is a summary of the information contained in the six books described above. It covers the subject of weather in sufficient detail for the layman, deals with the construction and proper use of instruments used in observing the weather, and gives the history of the development of many of them. Has 140 pages handsomely and durably bound in imitation leather, lettered in gold. Retailers readily at \$1.00 each. | |

U. L. ...
JAN 29 ...
1917

**Short & Mason *Tycos*
Meteorological and Other
Scientific Instruments**

Manufactured by
Short & Mason, Ltd.
London, England



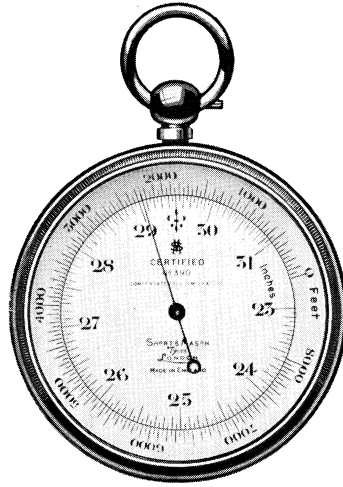
Short & Mason *Tycos* Super-Grade Certified Watch-Size Aneroid Barometers

(English Manufacture)

Carefully-selected movement.

Compensated for temperature.

Certificate supplied with every instrument.



No. 2000
(Actual size)

Superior-quality soft-leather case.

Equally-divided altitude scale.

A pocket altitude barometer of character.

This super-grade instrument is made possible by a complete manufacturing equipment, a long experience in the manufacture of meteorological instruments, and a force of skilled workmen trained from father to son through several generations.

No better pocket aneroid barometer is obtainable from any source, at any price. Specially recommended for tourists, engineers and prospectors.

No. 2000 S. & M. *Tycos* Super-Grade Watch-Size Aneroid Barometer **\$50.00** EACH
 Gold-plated case, 1 $\frac{3}{4}$ " in diameter; silvered-metal dial; altitude scale to 8,000 feet in 50-foot divisions; compensated for temperature; certified. In soft suede case, with correction certificate in pocket of case. Weight about 6 ounces.

No. 2000B Same as No. 2000, except reading to 3,000 feet in 10-foot divisions **53.00**

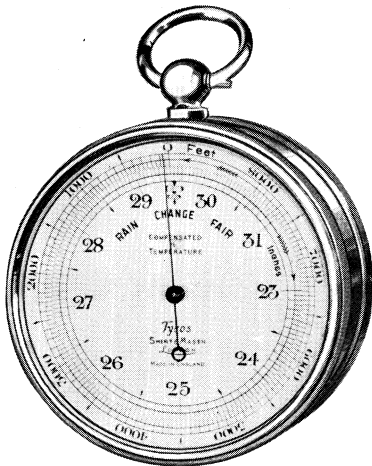
No. 2000E Same as No. 2000, except reading to 12,000 feet in 50-foot divisions **53.00**

No. 2000F Same as No. 2000, except reading to 16,000 feet in 100-foot divisions **56.00**



Short & Mason *Tycos* Watch-Size Aneroid Barometers

(English Manufacture)



Barometer Side



Compass and Thermometer Side

No. 2007K

(Illustrations actual size)

Best-quality combination barometer, thermometer and compass. Combines in one compact case three indispensable instruments for the traveler, tourist, geologist, or engineer.

No. 2007K S. & M. *Tycos* Watch-Size Aneroid Barometer **\$75.00** EACH

Aluminum case $1\frac{3}{4}$ inches in diameter; silvered-metal dial; revolving altitude scale to 8,000 feet in 50-foot divisions; compensated for temperature; small compass and thermometer on reverse side. In morocco case. Weight about 6 ounces.

No. 2007KE Same as 2007K, except reading to 12,000 feet in 100-foot divisions **77.50**

No. 2007KF Same as 2007K, except reading to 16,000 feet in 100-foot divisions **80.00**

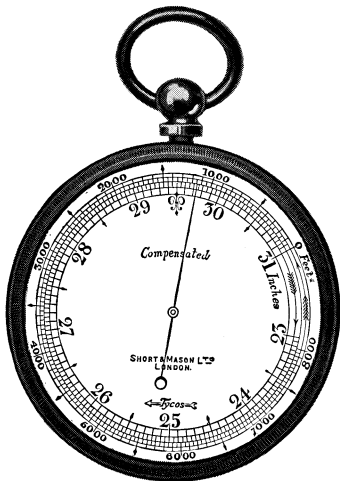


Short & Mason *Tycos* Watch-Size Aneroid Barometers

(English Manufacture)

This line of Short & Mason *Tycos* Watch-Size Aneroid Barometers is popular with tourists, engineers and prospectors, for use both as "hill measurers" and weather indicators. They are coming to be looked upon by tourists as being as essential as a camera to an all-round satisfactory trip.

(Best Quality)



No. 2003
(Actual size)

No. 2003 S. & M. *Tycos* Aneroid Barometer . . . EACH \$37.50

Gold-plated case, 1¾ inches in diameter; silvered-metal dial; altitude scale to 8,000 feet in 50-foot divisions; compensated for temperature. In soft leather case. Weight about 5 ounces.

No. 2003E Same as No. 2003, except reading to 12,000 feet in 50-foot divisions. 41.00

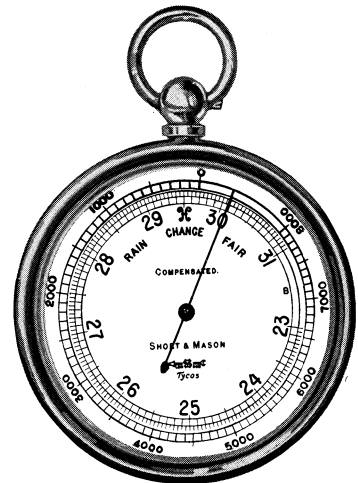
No. 2003F Same as No. 2003, except reading to 16,000 feet in 100-foot divisions. 45.00

(Second Quality)

No. 2021 S. & M. *Tycos* Aneroid Barometer . . . EACH \$25.00

Gold-plated case, 1¾ inches in diameter; silvered-metal dial; altitude scale to 8,000 feet in 100-foot divisions; compensated for temperature. In soft leather case. Weight about 5 ounces.

No. 2021E Same as No. 2021, except reading to 12,000 feet in 100-foot divisions. 27.00



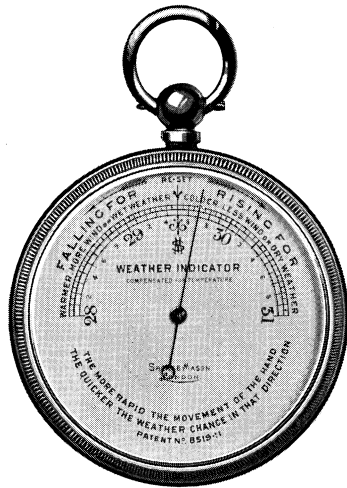
No. 2021
(Actual size)



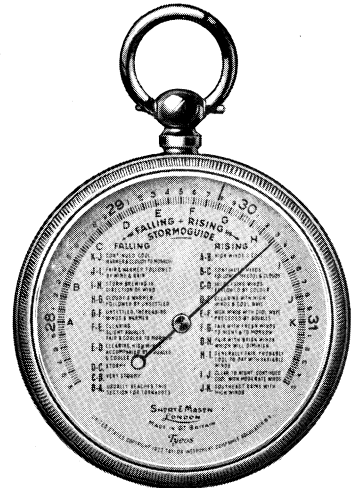
Short & Mason *Tycos* Pocket "Stormoguides" and Weather Indicators

(English Manufacture)

The ideal Pocket Barometer for Hunters,
Fishermen, and Campers.



No. 2025



No. 2055

(Illustrations actual size)

No. 2025 S. & M. *Tycos* Pocket Weather Indicator..... EACH \$36.00

Gold-plated case, 1 3/4 inches in diameter; silvered-metal dial; movement compensated for temperature; in soft suede carrying case. Weight about 5 ounces.

No. 2055 S. & M. *Tycos* Pocket "Stormoguide"..... 45.00

In gold-plated case; 1 3/4 inches in diameter; silvered-metal dial; movement compensated for temperature; in soft suede carrying case with revolving altitude back plate; for use in altitudes from 0 to 3500 ft. Weight about five ounces.

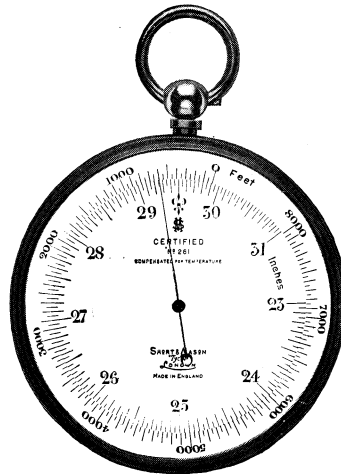


S. & M. Tycos Super-Grade Certified Pocket-Size Aneroid Barometers

(English Manufacture)

Highest-quality compensated movement, carefully selected.

Equally-divided altitude scale.



Certificate and fine-quality soft-leather case supplied with each instrument.

No. 2040

(About two-thirds actual size)

This super-grade pocket barometer is made by workmen who have spent a lifetime in the making of instruments of highest accuracy. Years of experience has made it possible to turn out an aneroid of unquestionable quality.

Prospectors, engineers, and tourists will find these barometers well adapted to their use. Much more open readings can be obtained from an aneroid of this size than from a "watch-size" aneroid (*pages 40 to 43*).

No. 2040	S. & M. Tycos Super-Grade Pocket-Size Aneroid Barometer.	EACH \$57.00
	Gold-plated case, 2¾ inches in diameter; silvered-metal dial; altitude scale to 8,000 feet in 50-foot divisions; compensated for temperature; certified. In soft leather case, with certificate in pocket of case. Weight about 7 ounces.	

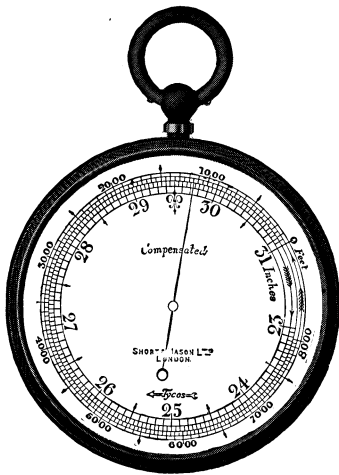
No. 2040B Same as No. 2040, except reading to 3,000 feet in 10-foot divisions **60.00**

No. 2040E Same as No. 2040, except reading to 12,000 feet in 50-foot divisions. **60.00**



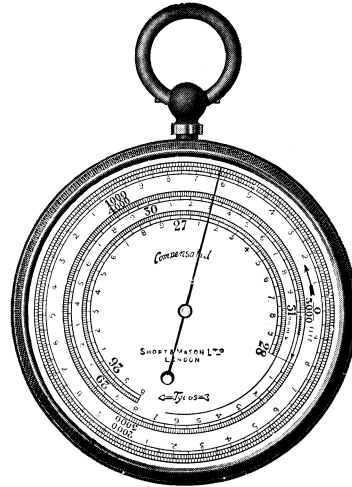
Short & Mason *Tycos* Pocket-Size Aneroid Barometers

(English Manufacture)



No. 2042

(Illustrations about two-thirds actual size)



No. 2047 1/2

These barometers are the size commonly carried by engineers, being larger and easier to read than the "watch size" (pages 40 to 43) which are designed especially for travelers and tourists. These pocket-size aneroids are popular also with both amateur and professional meteorologists, as they can use them on their desks for forecasting the weather.

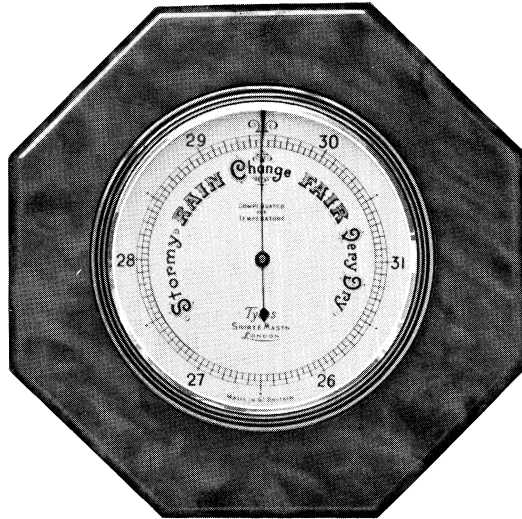
We make for geologists a larger and finer barometer, with vernier, about which we will gladly furnish information on request.

No. 2042	S. & M. <i>Tycos</i> Pocket-Size Aneroid Barometer	EACH \$50.00
	Gold-plated case, 2 3/4 inches in diameter; silvered-metal dial; altitude scale reading to 8,000 feet in 50-foot divisions; compensated for temperature. In soft leather case. Weight about 8 ounces.	
No. 2042B	Same as No. 2042, except reading to 3,000 feet in 10-foot divisions.	53.00
No. 2042E	Same as No. 2042, except reading to 12,000 feet in 50-foot divisions.	53.00
No. 2047 1/2	Same as No. 2042, except reading to 5,000 feet in double circle of divisions subdivided to five feet; soft leather case; with S. & M. certificate.	70.00



Short & Mason *Tycos* Desk Barometers

(English Manufacture)



No. 2054

(About two-thirds actual size)

This S. & M. *Tycos* Desk Barometer is popular with the executive, permitting him to forecast the weather from his desk. The beauty of design makes it eminently suitable also for the home.

- | | | |
|------------------|---|-------------------------------|
| No. 2054B | S. & M. <i>Tycos</i> Desk Barometer | EACH
\$30.00 |
| | Best-quality movement, compensated for temperature; engraved silvered-metal dial; in peacock-blue frame; gilt strut on back, to support instrument upright on desk or table. Each in a cardboard box. | |
| No. 2054M | Same as No. 2054B, except in mottled-granite-brown frame | 30.00 |
| No. 2054S | Same as above, except in imitation-tortoise-shell frame | 30.00 |

Short & Mason *Tycos* Traveling Sets

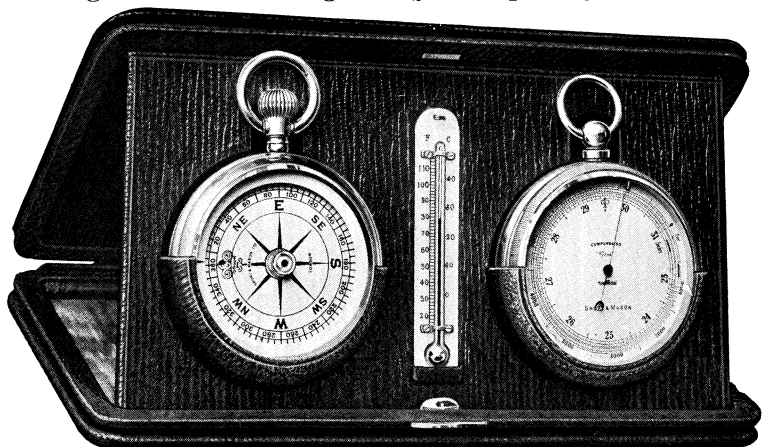
(English Manufacture)

These sets include three instruments indispensable to the traveler, the tourist, the hunter; in fact to all who spend any time in the great out-of-doors.

- | | | |
|------------------|---|-------------------------------|
| No. 2049S | S. & M. <i>Tycos</i> "Livingstone" Traveling Set (<i>finest quality</i>) | EACH
\$60.00 |
|------------------|---|-------------------------------|

Comprises a No. 2003 (page 42) 1 3/4-inch best-quality watch-size aneroid barometer, compensated for temperature and dial graduated to 8,000 feet altitude in 50-foot divisions; a full-size pocket magnetic compass and an ivory-scale thermometer. All in best-quality blue soft skiver carrying case, with easel back, as illustrated. Weight about 11 ounces.

NOTE—Can be supplied with No. 2003 aneroid barometer reading to 12,000 or 16,000 feet, as an extra (see page 42).



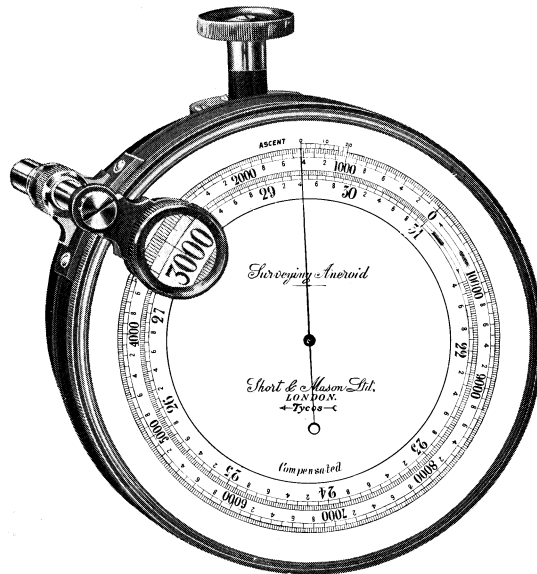
No. 2049

(About two-thirds actual size)



Short & Mason *Tycos* Special Surveying Aneroid Barometers

(English Manufacture)



No. 2121D
(About one-half actual size)

New features have been added to this exceptional instrument, making it the ideal surveying barometer. These features are the revolving altitude scale and the device for locking the scale. Special with S. & M. *Tycos* Surveying Barometer only.

These instruments are designed especially for readily ascertaining slight variations of gradients, levels, etc. For approximate surveys and levelings for roads, railways, canals, water courses and mines they are invaluable, as their readings are taken so easily and so rapidly. They are in great demand by geologists in the oil regions, for checking up slight differences in elevation.

The action has been arranged to give accurate readings on a regular scale of altitudes. The barometer scale of inches has been made progressive, to afford the correct relative readings with the scale of altitudes, but this arrangement in no way interferes with their use as ordinary barometers.

	EACH
No. 2120 S. & M. <i>Tycos</i> Surveying Aneroid Barometer	\$102.00
Aluminum case three inches in diameter; silvered-metal dial with vernier; altitude scale moved by rackwork motion; device for locking altitude scale; reading lens arranged to traverse the entire circle; movement compensated for temperature; altitude scale 6,000 feet, reading by vernier to two feet of elevation. In leather sling carrying case. Weight about 38 ounces.	
No. 2120B Same as No. 2120, except for readings to 3,000 feet only and reading by vernier to single feet of elevation.	107.50
No. 2121 Same as No. 2120, except 5 inches in diameter and reading by vernier to single feet of elevation; weight 49½ ounces.	117.00
No. 2121B Same as No. 2121, except for readings to 3,000 feet only reading by vernier to single feet of elevation.	122.50
No. 2121D Same as No. 2121, except for readings to 10,000 feet; vernier reading to two feet of elevation.	122.00
No. 2121F Same as No. 2121, except for readings to 16,000 feet; vernier reading to two feet of elevation.	128.00

Short & Mason *Tycos* Cylindrical-Brass-Case Weather Barometers

(English Manufacture)



No. 2218

(About three-fifths actual size)

A high-grade aneroid barometer for the professional man, ship's officer, meteorologist, or engineer. The vacuum chambers being $2\frac{3}{4}$ inches in diameter, these instruments are specially recommended for accurate and important meteorological work.

No. 2218 S. & M. *Tycos* Cylindrical-Brass-Case Weather Barometer **EACH \$45.00**

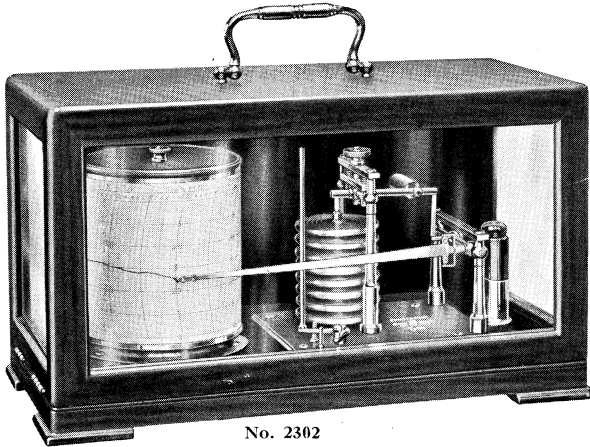
Dial reads to 0.01 of an inch, and the hand is extra fine; first-quality movement compensated for temperature; $4\frac{3}{4}$ inches in diameter, $2\frac{1}{8}$ inches deep with straight sides; bevel-glass crystal; hand-engraved metal dial; polished and lacquered brass case. In morocco snap carrying case. Weight about 28 ounces.



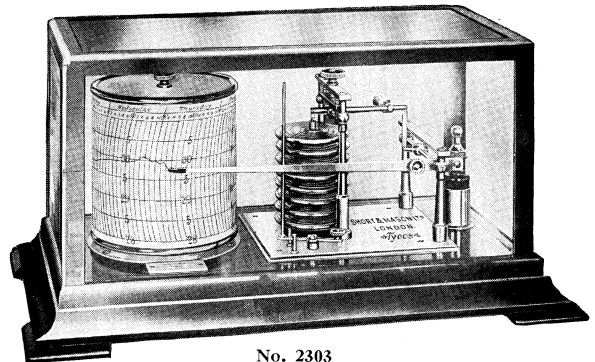
Short & Mason *Tycos* "Stormographs" (Recording Barometers)

(English Manufacture)

As Supplied to U. S. Weather Bureau, U. S. Navy Yard, Coast and Geodetic Survey, Bureau of Plant Industry, etc.



No. 2302



No. 2303

(Illustrations about one-fifth actual size)

In weather prognostication a single observation of the barometer is of little or no value, and while frequent readings will if recorded convey the desired information, provided changes in atmospheric pressure are gradual, yet when sudden changes occur between observations, such records will be missing and probably will lead to a misinterpretation of "weather signs".

The "Stormograph" is a most reliable form of barometer for indicating the present-time atmospheric pressure, but its special value lies in the continuous hourly record of every fluctuation in pressure which it creates on a seven-day chart, showing not only the extent of the various changes, but also the time of their occurrence.

No. 2302	S. & M. <i>Tycos</i> "Stormograph"	EACH \$105.00
	Mahogany case 12 inches long, 7 inches high, 6 inches deep; cover hinged at end; glass in front and one end; handle for carrying. Weight 6¾ pounds. With year's supply of charts, and bottle of ink.	
No. 2303	S. & M. <i>Tycos</i> "Stormograph"	105.00
	Mahogany frame, 14 inches long, 7 inches high, 8 inches deep; plain glass cover. Weight 7½ pounds. With year's supply of charts, and bottle of ink.	
No. 2305	S. & M. <i>Tycos</i> "Stormograph"	125.00
	Mahogany case, 14½ inches long, 8 inches high, 8¾ inches deep; beveled-plate glass; front-opening drawer, which has two divisions, for holding used and unused charts. Weight, 11 pounds. With year's supply of charts, and bottle of ink.	

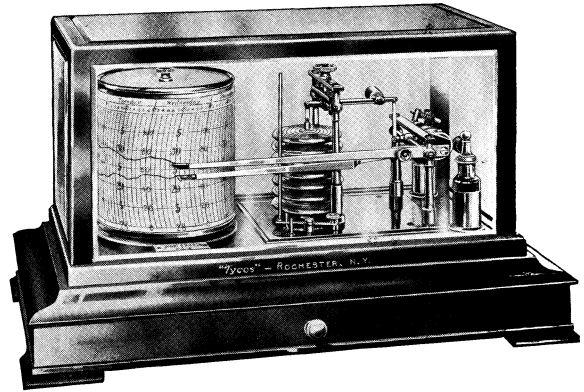
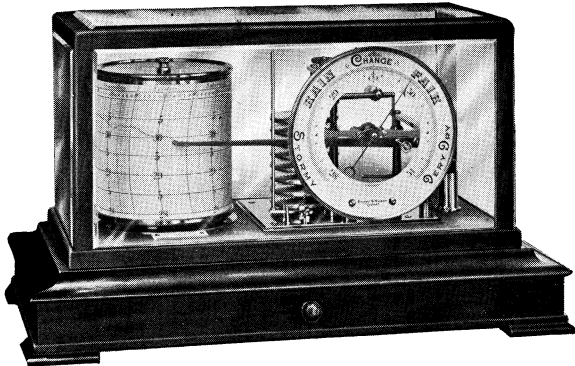
Extras for "Stormographs"

Set (year's supply) of No. 2 perforated charts.....	\$3.00
Ink, plain bottle.....	.50
Ink, stoppered bottle.....	1.00
V-Shape Pens.....	1.00



Short & Mason *Tycos* "Stormographs"

(English Manufacture)



Fitted to Stormograph No. 2305

Illustrating "NN" Attachment (British Registered No. 428,606. Design Copyrighted.)

Illustrating "PP" Attachment (British Design Registered No. 476,369. Chart Copyrighted)

(Illustrations about one-fifth actual size)

The S. & M. "NN" attachment illustrated above on a No. 2305 S. & M. *Tycos* "Stormograph" can be fitted to any of the "Stormographs" (listed page 49). It combines with the record of the "Stormograph" chart the dial readings of an ordinary aneroid barometer. Being actuated by the same movement and adjusted to complete agreement, the pen on the chart and the hand on the dial invariably give the same indications.

The advantage of this combined "Stormograph" and Aneroid Barometer to the lay user is obvious; the present-time barometer readings are more readily determined by the dial, while the chart records the hourly variation in pressure, as indicated on the dial. Instead of complicating the "Stormograph", it really simplifies it, and adds a most interesting feature. The dial readings are engraved on silvered metal and it is attached as in above illustration.

DESCRIPTIVE LETTER	EACH
"NN" S. & M. <i>Tycos</i> Auxiliary Dial for "Stormographs"	\$20.00
Can be attached to any "Stormograph" (listed page 49).	

The S. & M. "PP" Thermograph attachment illustrated above on a No. 2305 S. & M. *Tycos* "Stormograph" can be fitted to any of the "Stormographs" (listed page 49), furnishing barometer and thermometer readings on the same chart. The range of the barometer is from 28 to 31 inches, while the thermometer shows a range of 0° to 120°F. in 2° lines. Two colors of ink are used (blue for the barometer record and green for the thermometer record) avoiding any possible confusion of records.

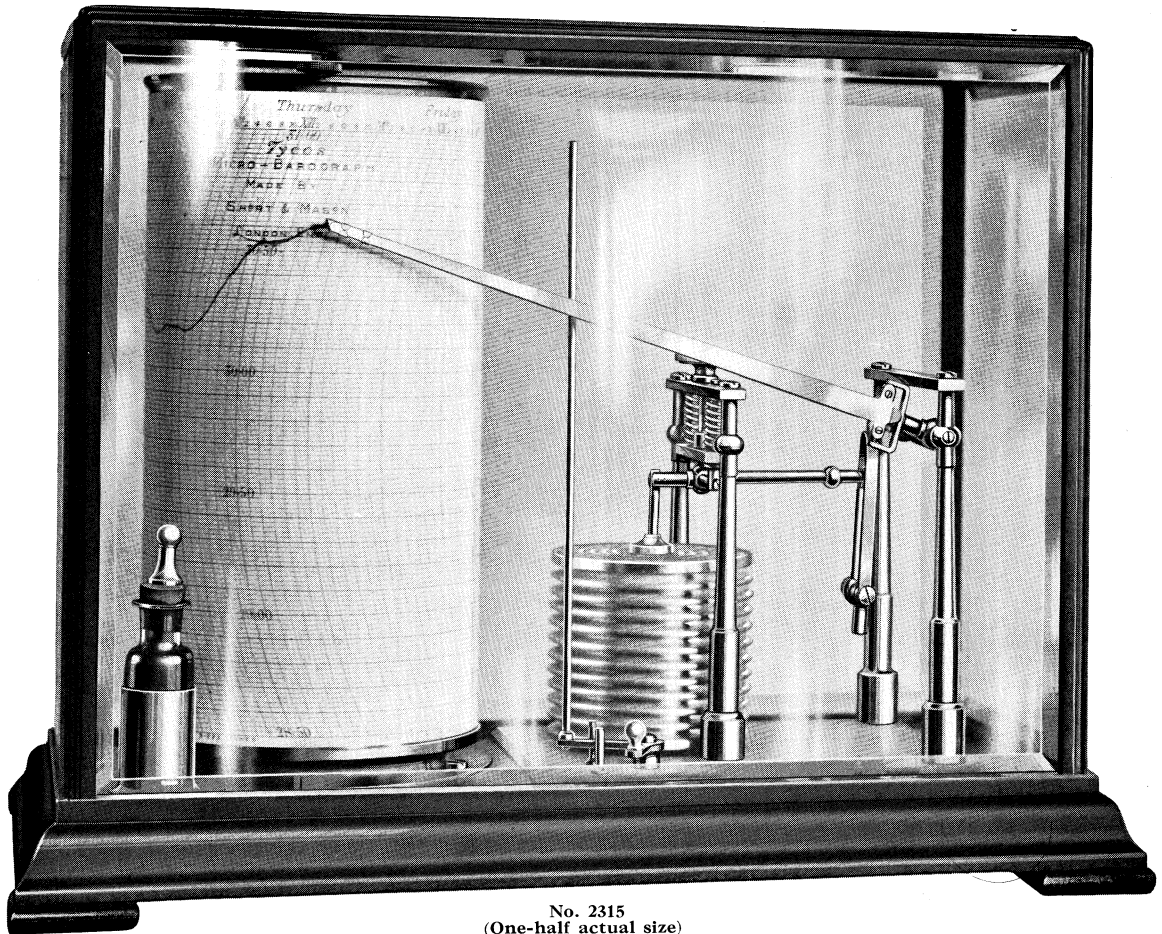
DESCRIPTIVE LETTER	EACH
"PP" S. & M. <i>Tycos</i> Thermograph Attachment for "Stormographs"	\$30.00
Can be attached to any "Stormograph" (listed page 49).	

No. 20 Perforated Charts for "Stormo-Thermographs" (year's supply) **\$3.50**



Short & Mason *Tycos* "Micro-Barographs"

(English Manufacture)



No. 2315
(One-half actual size)

The "Micro-Barograph" has a remarkably sensitive movement and an unusually high chart, furnishing a record of even the smallest changes in atmospheric pressure. Slight variations, hardly visible on an ordinary barograph chart, are read easily from the chart of a "Micro-Barograph."

Public-Service Corporations find the "Micro-Barograph" of immeasurable value in guarding their equipment against storm periods, enabling them to have emergency equipment and workmen available with the least possible delay.

Laboratories, where the determination of atmospheric pressure has a decided bearing on the results of certain investigations and experiments, find the "Micro-Barograph" a valuable addition to their equipment.

Universities, Technical Schools, and High Schools can use the "Micro-Barograph" to great advantage in connection with lectures, in the study of atmospheric pressure and its effect upon other natural phenomena, because of its sensitiveness and its records of slight variations.

Surveyors and Engineers find the "Micro-Barograph" an ideal instrument for use at the station (starting point) when checking up differences of elevation by means of an altitude barometer, or surveying aneroid, showing as it does very minute variations of atmospheric pressure, which would affect the readings of the altitude barometer.

No. 2315	Short & Mason <i>Tycos</i> "Micro-Barograph"	EACH \$250.00
	Metal frame 12 inches long by 9 inches high by 6½ inches deep; beveled plate-glass sides and top; chart is 10¾ inches long by 6½ inches high. Weight 14 pounds and 2 ounces. Complete with year's supply of charts and bottle of ink.	

No. 130	Extra Charts for "Micro-Barograph" (year's supply)	4.50
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(Extra for pens and ink same as on page 49)



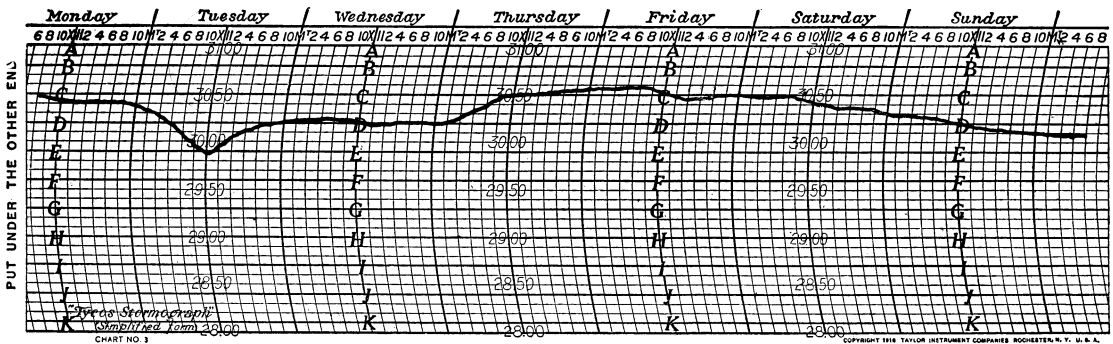
Short & Mason Tycos "Micro-Barographs"

(Listed on page 51)

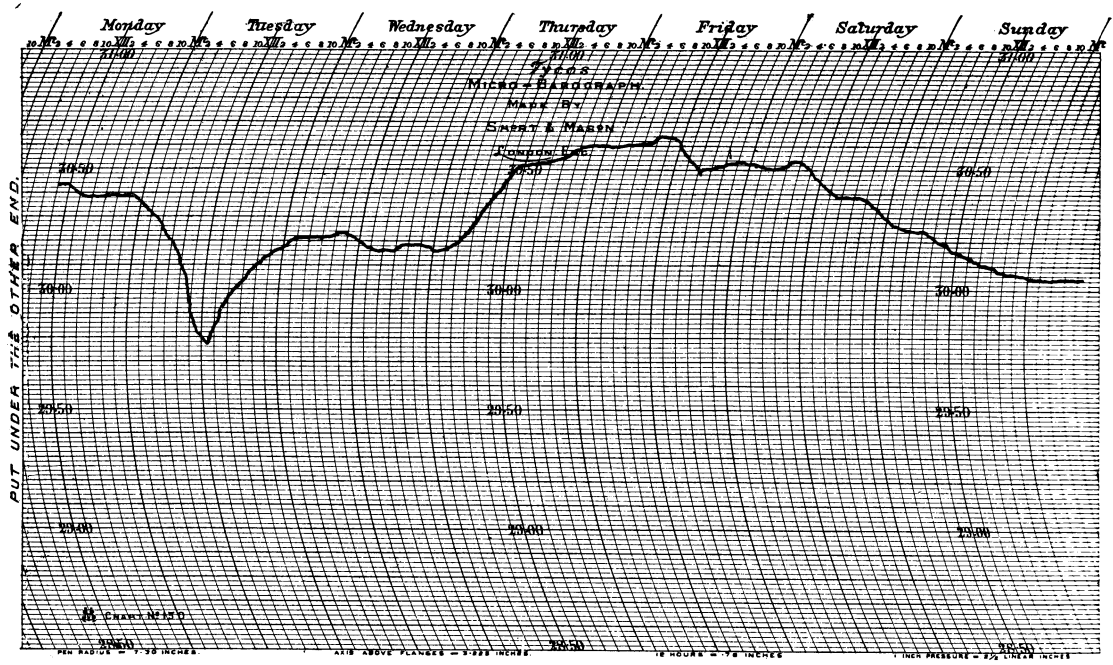
The half-size illustrations (*below*) of a chart and record from an ordinary barograph and a "Micro-Barograph" record covering the same period of time, visualize the great advantage of the "Micro-Barograph" when close readings are important.

Whereas it is possible with the regular type of barograph to read only to .10 (one-tenth) of an inch of pressure, the charts used on the "Micro-Barograph" are divided to .02 (two hundredths) of an inch of pressure and these small divisions can be subdivided by the eye to .01 (one hundredth) of an inch.

As shown by the illustrations (*below*) an inch of pressure covers a space on the "Micro-Barograph" chart of approximately 2½ times that on an ordinary chart, making it possible to read slight variations which would be hardly visible on an ordinary chart.



Record made by a regular-size Barograph during the week ending Nov. 4th, 1923.
(One-half actual size)

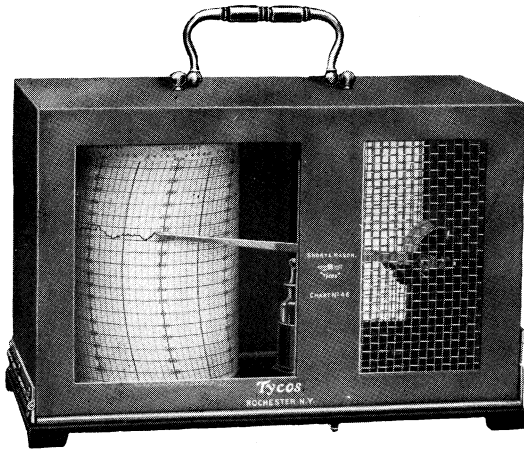


Record made by a "Micro-Barograph" during the same period ending Nov. 4th, 1923.
(One-half actual size)

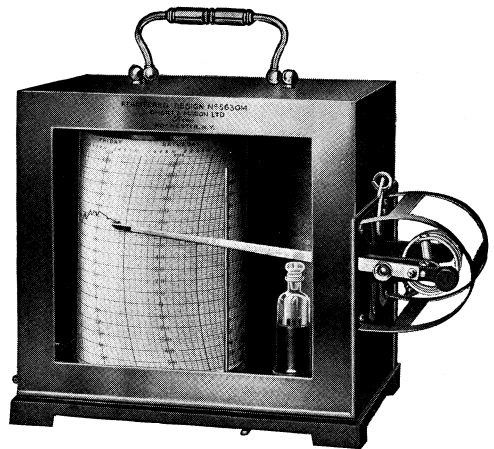


Short & Mason *Tycos* Thermographs (Recording Thermometers) (English Manufacture)

As supplied to U. S. Weather Bureau, Bureau of Plant Industry, U. S. Navy Yard, Bureau of Engraving and Printing, Dept. of Botanical Research. Official Pattern of British Meteorological Service, British Air Ministry, etc.



No. 2353 1/2



No. 2360

(Illustrations about one-fifth actual size)

The bimetallic coils used in these instruments have been proven to be more satisfactory than the old-style liquid thermostats. The new "gate" arm reduces friction between pen point and chart and there are no levers to cause "lag" or "creep" errors.

Instrument No. 2360 can be arranged to show temperatures covering any 75°F., 150°F. or 300° F. range, and charts are sent ruled only, so they can be figured at the will of the user. An engraved-stem mercurial thermometer accompanies each No. 2360, to assist the user in the adjustment of his instrument.

If an instrument with a range of 150° F. is to be used, the first thing necessary is to figure the chart in the manner desired. As an instance, suppose it was arranged with the 50° at the bottom of the chart and 200° at the top, covering 150° F. from lowest to highest point. The chart should then be placed around the clock drum, the setting thermometer placed in proximity to the coil, and the reading taken. Imagine it reading 65° F. At the end of the pen arm will be found a nickel-plated screw securing it to the bar running at right angles through the spiral thermometric coil. When this is loosened the arm is free for adjustment. Place the pen arm on the 65° F. mark on chart (agreeing with the mercurial thermometer), and tighten screw again, thus securing it to the horizontal bar. Small final adjustments can be made by the long screw at the back of the coil, with the fingers or an ordinary screw-driver.

No. 2353 1/2 S. & M. *Tycos* High-Drum-Clock Thermograph \$105.00

This instrument has oxidized-copper hinged case 14 inches long by 6 7/8 inches high by 5 1/16 inches deep, with iron base; is supplied with seven-day clock, bottle of ink, and a year's supply of No. 46 Charts (range minus 62°F. to 126°F.); has recording lamina inside. Weight about seven pounds.

No. 2360 S. & M. *Tycos* "M.O."-Pattern Thermograph 105.00

As used by the English Meteorological Office. Has exposed lamina, which insures perfect circulation of air. A sensitive, durable, portable recording thermometer. Hinged copper lid; cast-metal base; is 7 inches long by 6 7/8 inches high by 5 1/16 inches deep; supplied with 7-day clock and 6-inch setting thermometer, for purposes of comparison. Complete with bottle of ink, and a year's supply of No. 54 unfigured charts for any 75° range, or No. 46 Charts (range minus 62°F. to plus 126°F.). Weight about 7 1/2 pounds.

NOTE—No. 2353 1/2 and 2360 can be supplied without extra charge, if so specified on order, to show any range covering 75°F., 150°F. or 300°F., the charts being ruled but not figured, so that the user can fill them in to suit his requirements. In specifying chart wanted, use "A" for 75° range, "B" for 150° range and "C" for 300° range.

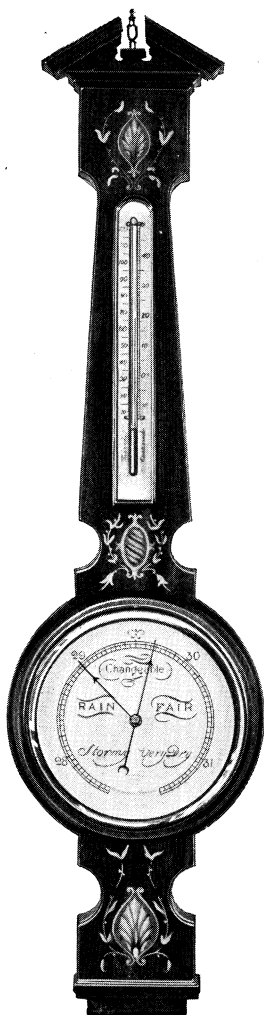
Extras for S. & M. *Tycos* Thermographs

Charts No. 46 (year's supply)	\$3.50	Ink, per bottle	\$.50
Charts No. 54 (year's supply) unfigured	3.50	Pens, each	1.00

Short & Mason *Tycos* Pendant Barometers

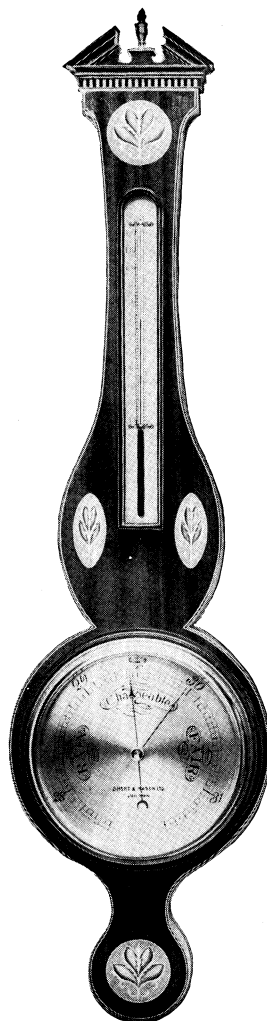
"Sheraton" (Old English) Designs

(English Manufacture)



No. 2470

(Design Registered in Great Britain)



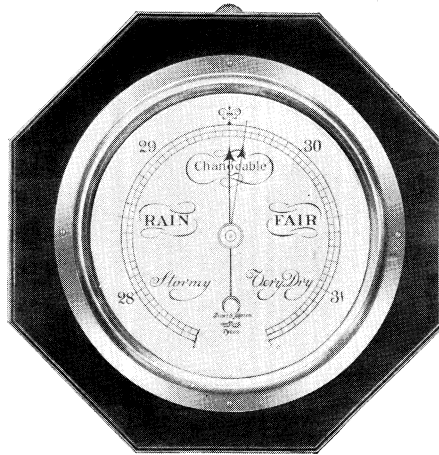
No. 2471

- | | | |
|--------------------|--|-------------------------------|
| No. 2470-8" | S. & M. <i>Tycos</i> Pendant Aneroid Barometer | EACH
\$70.00 |
| | Inlaid solid mahogany, old-pattern wheel aneroid barometer (39 inches by 11 inches), pediment top; antique silvered-metal 8-inch dial; red-liquid filled thermometer; first-quality compensated movement. Weight about 7¼ pounds. | |
| No. 2470-5" | Same as No. 2470-8", except 5-inch dial (27 inches by 7 inches) | 53.00 |
| | Weight about 3¾ pounds. | |
| No. 2471-8" | S. & M. <i>Tycos</i> Pendant Aneroid Barometer | 70.00 |
| | Inlaid solid mahogany, old-pattern wheel aneroid barometer (39 inches by 10½ inches), pediment top; antique silvered-metal 8-inch dial; red-liquid-filled thermometer; first-quality compensated movement. Weight about 7½ pounds. | |
| No. 2471-5" | Same as No. 2471-8", except 5-inch dial (27 inches by 7 inches) | 53.00 |
| | Weight about 3½ pounds. | |
| | NOTE—Above barometers furnished with revolving altitude adjustment for setting to sea-level reading for use in altitudes to 3,500 feet. | EXTRA
\$5.00 |



Short & Mason *Tycos* Octagonal-Frame Aneroid Barometers

(English Manufacture)



No. 2555½

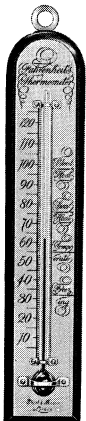
(About one-fourth actual size)

No. 2555½ S. & M. *Tycos* Inlaid Solid-Mahogany Octagonal Aneroid Barometer **EACH \$30.00**

One of the choicest designs we have ever offered. The metal dial is gilt finished, to match the bezel; dial 6 inches in diameter; case 9 inches in diameter. Movement not compensated. Each in a cardboard box. Weight about 3½ pounds.

No. 2555½A Same as No. 2555½, except with best-quality compensated movement **32.00**

NOTE—Above barometers furnished with altitude adjustment up to 3,500 feet **EXTRA \$5.00**



Short & Mason *Tycos* Indoor Thermometers

(English Manufacture)

Something decidedly recherche in cabinet (wood-back) thermometers. Decorative black lettering and figuring in the Daniel Quaire style, on brass scale. Genuinely antique in its appearance. A companion-piece to the octagonal barometer described above.

No. 3710 S. & M. *Tycos* Indoor Thermometer **EACH \$5.00**

No. 3710
(About one-fourth actual size)

Mahogany 8-inch back; indoor temperature range approximately 10° to 120° F.; plain tube filled with red liquid; gold-plated fittings; black figures and letters on brass scale. Each in a cardboard box. Weight about 7 ounces.



Short & Mason *Tycos* Rain Gauges

(English Manufacture)

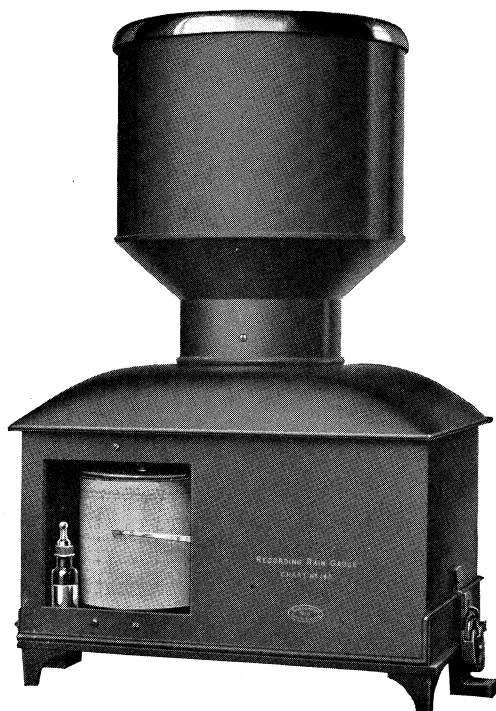


No. 2721
(About one-fourth actual size)

Zero-Setting Registering Rain Gauges

No measurement in a graduated glass is necessary. The rain is collected in an 8-inch receiver, passes through a small pipe and drops into one side of a bucket. When 0.01 of an inch of rain has collected, its weight causes the bucket to overbalance and the hand moves mechanically 0.01 of an inch on the dial. The rain, still passing through the receiver, is collected in the opposite bucket, and when that has received the given amount the operation is repeated.

With this gauge it is possible to keep a record of rainfall by the month or week, since with the zero-setting device no calculation is necessary. The dial registers one inch in 1-100th of an inch; the second (smaller) dial reading upwards to 12 inches.



No. 2724½N
(About one-fifth actual size)

NO.		EACH
2721	S. & M. <i>Tycos</i> Zero-Setting Registering Rain Gauge.....	\$60.00
	Japanned metal case, 10 by 8 inches. Weight about 6 pounds.	
2721A	Same as No. 2721, except copper case.....	72.00

Recording Rain Gauges

This gauge operates with tilting buckets, and also records on a chart the amount of rainfall. When the rainfall during the time covered by the chart reaches the full amount of the chart range the mechanism automatically trips itself and the pen returns to zero and continues its record.

They are furnished (listed below) with 24-hour charts scaled to one-half of an inch divided to .01 of an inch, and also with 7-day charts scaled to one inch of rain, divided to .02 of an inch, with mechanism arranged to operate according to the increased range of the chart. Padlock and key are provided, to prevent tampering while rainfall is being recorded.

Insurance companies find this instrument admirably adapted to their requirements, and prefer No. 2724½N, with 24-hour charts.

NO.		EACH
2724½N	S. & M. <i>Tycos</i> Recording Rain Gauge.....	\$160.00
	Japanned metal case; funnel 8 inches in diameter and 6 inches deep; recording on No. 145, 24-hour chart scaled to ½", divided to .01 inch. Complete with 100 charts and bottle of ink. Weight about 15½ pounds.	
2724½	S. & M. <i>Tycos</i> Recording Rain Gauge.....	160.00
	Same as No. 2724½N, except with No. 121, seven-day chart, scaled to 1 inch, divided to .02 inch. Complete with a year's supply of charts and bottle of ink. Weight about 15½ pounds.	

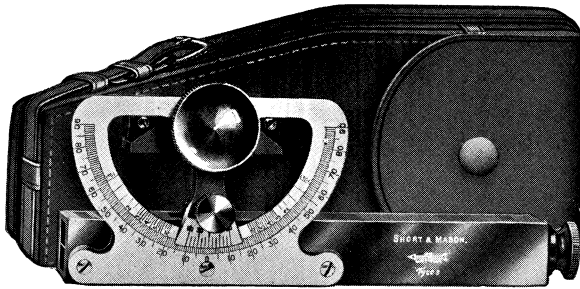
Extras For Recording Rain Gauges

Set (100 charts) of No. 145 charts.....	\$5.00	Ink, stoppered bottle.....	\$1.00
Set (year's supply) of No. 121 charts.....	3.00	V-Shape Pens.....	1.00
Ink, plain bottle.....	.50		

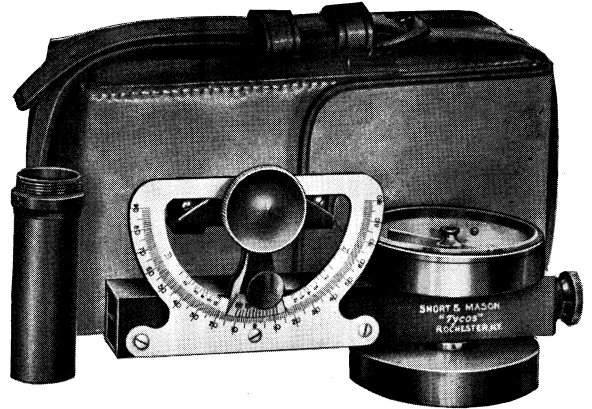


Short & Mason *Tycos* Abney's Levels

(English Manufacture)



No. 3001



No. 3005

(Illustrations about one-half actual size)

This instrument is used for ascertaining the height of buildings, trees, or other objects. Also for setting out gradients for railway, drainage and mining purposes, and any operation where angular distance or inclination of surface is required.

When the height of any object is to be taken, a fairly level piece of ground should be selected and a line of say 100 feet correctly measured from the object. This forms the base line. At the end of this line the observer should stand; then, directing his vision through the tube of the level, he should elevate it at the objective end until the highest point of the object is seen bisected by the cross wire of the reflector within the tube. While holding it steadily in this position, the spirit level which is attached to the axis of the arc should be turned upon its center by means of the milled head until the bubble reflected in the mirror is bisected by the cross wire of the reflector. The alignment is then complete and the height of the object is obtained by reading off the index of the arc.

The arc has two graduated scales, one reading in degrees 0 to 90 in both directions, and subdivided to 10 minutes, by vernier on the index. This will indicate the vertical angle.

The inner set of figures reading 1-1 to 10 is the grade scale. It is read off by the fiducial edge at the side of the index. When read after sighting on a distant object it gives the height of the object in terms of the base line. If therefore the edge coincides with division 4 the length of the vertical line, or the height of the object, is 1 in 4 of the base line. If the base line is 100 feet, the height of the object will be 25 feet above the level of the eye of the observer.

No. 3001½ has the grade scale figured in percentage of the measured base line. Instead of a reading 1 in 4 this instrument would indicate 25% as the length of the line.

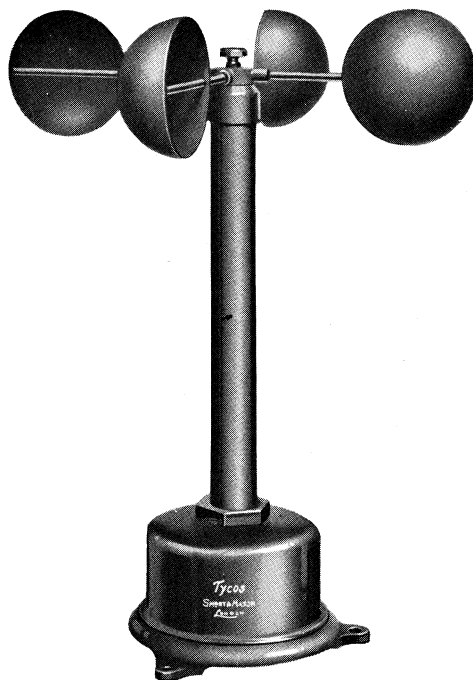
No. 3001	S. & M. <i>Tycos</i> Abney's Level	<small>EACH</small> \$30.00
	Five inches long; large nickel-silver arc with draw telescope and improved fixing-clamp to vernier. In leather sling carrying case. Weight 6 ounces.	
No. 3001½	Same as No. 3001, except with scale reading in degrees, and grade scale in percentages.	30.00
No. 3005	S. & M. <i>Tycos</i> Abney's Level	45.00
	Improved form as above, with compass and circular base on which the whole rotates, by means of which horizontal angles can be measured. In leather sling carrying case. Weight 11 ounces.	

Special Features of "S. & M." Abney's Levels

- | | |
|--|--|
| (1) <i>Nickel-silver arc, divided each way to 90°.</i> | (4) <i>A 7-inch level in a 5-inch space.</i> |
| (2) <i>Extra-long draw eyepiece.</i> | (5) <i>Positive vernier clamp.</i> |
| (3) <i>Enlarged arc with vernier to ten minutes.</i> | (6) <i>Leather sling case.</i> |



Short & Mason *Tycos* Electric Cup Anemometers For Meteorological Work (English Manufacture)



No. 3102
(About one-fifth actual size)

This instrument is a modification of the Robinson type of cup anemometer, which has been in use for meteorological work for some years. The essential features of the older instrument are retained, but in place of a counting mechanism the base of the *Tycos* Anemometer contains a contact-making movement.

With the older type it was necessary to take a reading of the dial both before and after the period of observation. This was not always a simple nor a desirable task, especially in bad weather.

It is possible to expose the *Tycos* instrument adequately and to take observations at any distance from it. Signals from the instrument can be received in any part of the building on which it is mounted.

This anemometer is strongly constructed, the base and column being made of iron and the cups of copper. It will withstand exposure indefinitely. The diameter of the cups is three inches and the radius of the path traversed by the cups is four inches.

The instrument is connected up with an electric bell, buzzer, or lamp, two or more dry batteries and a switch. The wiring is quite simple—certainly not more difficult than wiring an ordinary electric bell.

When taking a reading, the switch is closed, and the lamp, bell, or buzzer will indicate the completion of the circuit. All you need to know is the time between contacts. Reference can then be made to the table furnished with the instrument, which gives relative values in miles per hour.

No. 3102 S. & M. *Tycos* Electric Cup Anemometer \$85.00

PRICE WITHOUT
ACCESSORIES
EACH

Gray-enamel-finished cast-iron body; 3-inch cups; 4-inch arms; stands 16 inches high; over-all width 11 inches; diameter of base 5½ inches. Weight about 7½ pounds.

NOTE—The accessories are quite simple and can be obtained at a local hardware store.



Short & Mason *Tycos* Airmeters and Anemometers

(English Manufacture)

For registering pressure and velocity of air currents in mines, tunnels, sewers, and the ventilators of public buildings, etc. They are frequently used outside in meteorological work, for determining the true direction of surface winds.

The indications are obtained by means of a delicately-poised fan wheel, the record being commenced by the long hand, which traverses the extreme outer circumference of the main dial and is continued by a series of smaller dials.

Placed in an air passage the instrument registers automatically the rate at which air is traveling through it, and a simple observation will detect any slackening of the current arising from obstruction of the ways, or want of attention at the ventilating surface or fan-wheel.

High-Speed Anemometers

The introduction of strong blast currents in metal and other manufactures has necessitated an instrument to measure the currents at high-speed. These now are made to indicate satisfactorily up to 10,000 feet per minute. This calls for an instrument made exceptionally strong, with special movement; which requirements are met by our high-speed anemometer.

Zero-Setting Adaptation

The most valuable addition to anemometers is that of our special device by which all the indices, or hands, can be set back to the zero, or starting point. By this method, which it will be seen greatly facilitates the observer's work, the sum of the reading for any single observation can be taken instantly, without in any way having to consider a previous test.

Each instrument is supplied with a chart of corrections for different velocities.

Two-dial instruments stand velocities to 1000 feet a minute.

Four-dial and six-dial instruments stand velocities to 3000 feet a minute.

Airmeters and Anemometers cannot be guaranteed correct when used in a temperature of over 200° F.

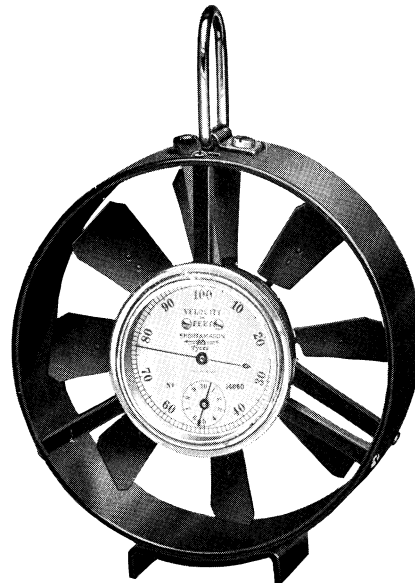


Short & Mason *Tycos* Jeweled Zero-Setting Airmeters and Anemometers

(English Manufacture)



No. 3121



No. 3130

(Illustrations about one-half actual size)

The *Tycos* Anemometer should be placed in the air channel, all hands having been set at zero. The stop lever can then be moved, and the instrument will start registering. At the end of one or five minutes, or any other period fixed for the test, move the stop lever and note the reading.

The reading will be the number of LINEAR feet of air that have passed the instrument during the period of observation. To obtain the number of CUBIC feet of air that have passed the anemometer, you should multiply the number of linear feet by the area of the channel.

In making tests it is desirable to place the anemometer in several different positions, always with the dial facing in the same direction as the current; i.e. so that the air passes through the instrument from back to front and not from front to back, except Nos. 3112 and 3121 Airmeters, which are placed so that exposed side of fan faces the current. By adding the various readings obtained and dividing by the number of tests, a mean reading is obtained.

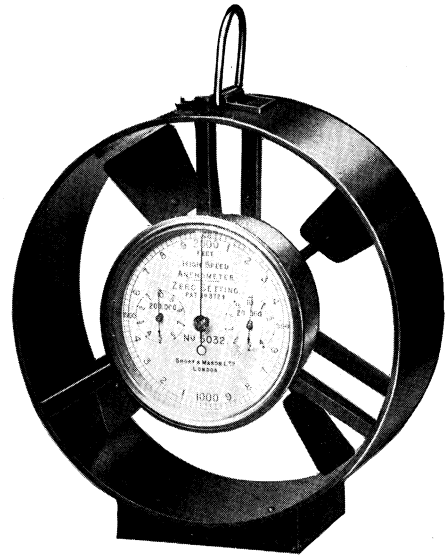
	EACH	
No. 3112	S. & M. <i>Tycos</i> Airmeter.....	\$60.00
	Jeweled movement; zero-setting; four dials reading to 100,000 feet; main dial 2½-inches in diameter; stands 3 inches high. In sole-leather carrying case. Weight 8½ ounces.	
No. 3121	Same as No. 3112, except with six dials reading to 10,000,000 feet.....	60.00
	NOTE—No. 3112 and 3121 will stand wind velocities up to 3,000 ft. per minute.	
No. 3130	S. & M. <i>Tycos</i> Biram's Anemometer.....	54.00
	Jeweled movement; zero-setting; two dials reading to 1,000 feet; main dial 3 inches in diameter. In sole-leather carrying case. Weight 8 ounces. Will stand wind velocities up to 1,000 ft. per minute.	
	Extra leather carrying cases for No. 3130.....	4.50



Short & Mason *Tycos* Anemometers (English Manufacture)



No. 3139
(About three-fourths actual size)



No. 3150
(About one-half actual size)

Pocket-Size Biram's Anemometer

This instrument has hinged lids of heavy-gauge metal and the dial is absolutely enclosed, insuring perfect safety.

No. 3139 S. & M. *Tycos* Pocket-Size Biram's Anemometer **EACH \$80.00**

Pocket size; diameter 2-inches; 3/4-inch thick; 2 dials reading to 1,000 feet; jeweled movement with stop; not zero setting. Weight 5 1/2 ounces.

This instrument will stand wind velocities up to 1,000 feet per minute.

High-Speed Anemometer

We have given much attention to the production of an anemometer capable of registering very strong blast currents, and can now supply them to register to 10,000 feet per minute.

No. 3150 S. & M. *Tycos* High-Speed Anemometer **EACH \$80.00**

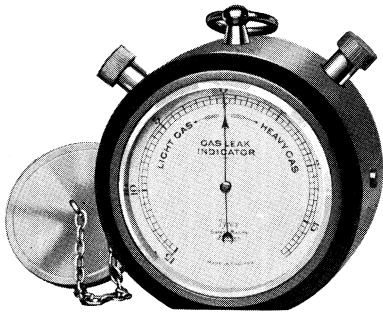
Registering to 200,000 feet; with disconnecter and zero-setting attachment; diameter 4 1/2 inches. In leather carrying case. Weight 25 ounces.

NOTE—Each instrument is tested and a chart of corrections supplied, but cannot be guaranteed correct when used in a temperature of over 200° Fahrenheit.

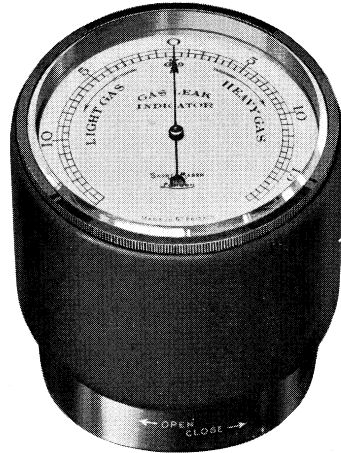


Short & Mason *Tycos* Gas-Leak Indicators

(English Manufacture)



No. 3405



No. 3406

(Illustrations about one-third actual size)

These instruments are very sensitive and will detect the presence of gas instantly. Their construction is based on a well-known scientific principle—that of diffusion of gases—and their mechanical application is effected by the employment of an elastic metal chamber, the bottom being made of a porous tile, through which diffusion takes place.

No. 3405 S. & M. *Tycos* Gas-Leak Indicator..... ^{EACH} \$55.00

In sole-leather carrying case with strap. Weight about 1¾ pounds.

No. 3406 S. & M. *Tycos* Gas-Leak Indicator..... 60.00

Improved type vertical form. In sole-leather carrying case with strap. Weight about 1¾ pounds.



Short & Mason *Tycos* Miners' Compass Dipping Needle

(English Manufacture)



No. 2974½

(About two-thirds actual size)

In the hands of the prospector this Miner's Compass, or Dipping Needle, proves a serviceable guide to the discovery and location of magnetic iron ore.

The magnetic needle is carefully balanced in a gimbal frame. It must be held so suspended that the needle is in the plane of the magnetic meridian. The stop being withdrawn the needle will swing freely, turning slightly in its frame to assume the correct magnetic plane. The needle will stop at a point inclined to the horizontal and can then be read. This deviation from the horizontal is called the "inclination," or "magnetic dip," and it varies in different latitudes.

When using this compass the observer must take into consideration the local magnetic dip, as well as the general geological formation. He should be able then to tell the approximate depth and mass of magnetic iron ore that he can trace.

The instrument must always be held in the approximate plane of the magnetic meridian. Immediately it is turned out of this plane the needle touches the glass cover and will not swing. The observer thus is certain always of the magnetic meridian.

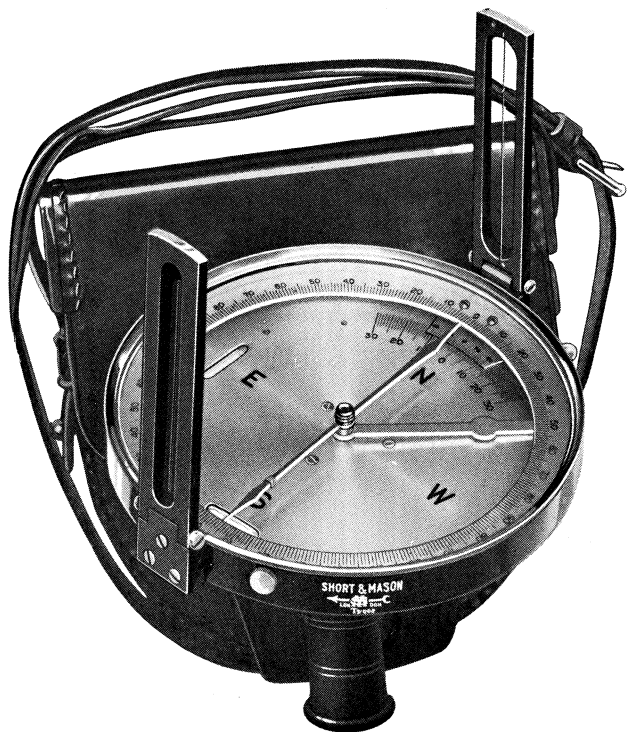
The instrument can be used also for locating pipe lines and iron inspection covers which may be covered out of sight. **IT WILL NOT INDICATE THE PRESENCE OF GOLD OR SILVER.**

No. 2974	S. & M. <i>Tycos</i> Miner's Compass.....	EACH \$30.00
	Fixed-meridian type; three inches in diameter. In velvet-lined morocco carrying case. Weight 9 ounces.	

No. 2974½	S. & M. <i>Tycos</i> Miners' Compass.....	40.00
	Norwegian gimballed cradle type; jeweled bearings. Weight 8 ounces. Will always point to the magnetic north, irrespective of position of case. A very sensitive and efficient instrument.	

Short & Mason *Tycos* Surveying Compasses

(English Manufacture)



No. 2952



No. 2971B

(Illustrations about two-thirds actual size)

Excellent instruments for approximate work; reconnaissance and preliminary surveying. Strong enough to withstand the rough usage incidental to this use.

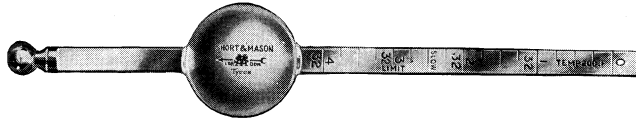
The adjustment for the local magnetic variation is made by loosening the clamp screw shown near the folding sight, and revolving the divided circle by means of its milled edge. The vernier gives readings to five minutes.

- | | | |
|------------------|---|-------------------------------|
| No. 2952 | S. & M. <i>Tycos</i> Surveying and Sight Compass | EACH
\$54.00 |
| | Diameter 3½ inches; ball-and-socket Jacob Staff fitting. Special leather case braced with aluminum fittings. Weight 21½ ounces. | |
| No. 2953 | S. & M. <i>Tycos</i> Surveying and Sight Compass | 72.00 |
| | Same as No. 2952, except five inches in diameter and with 4½-inch needle. Weight 36 ounces. | |
| No. 2971B | S. & M. <i>Tycos</i> Clinometer Compass | 30.00 |
| | Three-inch bronzed-metal case; silvered-metal dial; jeweled centre; bar needle. In leather carrying pouch. Weight 7½ ounces. Is so constructed that it can be used either as a clinometer or as a sight compass, the sights being made in the form of a bridge and to turn on their pivots at right angles. | |



Short & Mason *Tycos* Improved Patent Marine Salinometers

(English Manufacture)



No. 3301
(About one-third actual size)

The advantages of the S. & M. *Tycos* Patent Marine Salinometer over other types result from its construction, whereby the strength and rigidity of the instrument are greatly increased. The liability of leakage is prevented by doing away with the old system of screwed joints, which is made possible by providing the flotation bulb with a neck or collar at top and bottom, formed of the solid metal of the bulb. The flat tubular stem passes through this collar, fitting tightly, and is also soldered in the proper position. Because of the width of the flat stem, extending from the top down to the poise weight, these salinometers offer more resistance to the fluid, rotation is greatly minimized, and a steady poise is maintained.

The salinometer is used by marine engineers for ascertaining the saline density of the water used for the boilers. The stem is graduated from 0 in fresh water, as follows; $\frac{1}{32}$ denotes that in every 32 pounds of water there is 1 pound of salt held in solution, $\frac{2}{32}$ will be 2 pounds of salt in 32 pounds of water and so on to $\frac{3}{32}$ and $\frac{4}{32}$. The sub-divisions are quarter pounds. At $\frac{2\frac{1}{2}}{32}$, that is, midway between $\frac{2}{32}$ and $\frac{3}{32}$, the word "BLOW" is engraved. When the instrument floats at that mark, the temperature being 200 degrees Fahrenheit, it is necessary to blow off and admit fresh water into the boilers. At $\frac{3}{32}$, the word "LIMIT" is engraved, as it is dangerous to carry on when salinity of water exceeds this point.

Blowing-off Points

TEMPERATURE OF WATER	
200 degrees Fahrenheit	$\frac{2\frac{1}{2}}{32}$
180 degrees Fahrenheit	$\frac{2\frac{3}{4}}{32}$
160 degrees Fahrenheit	$\frac{3}{32}$

No. 3301 S. & M. *Tycos* Patent Salinometer..... **EACH \$4.50**

Made of nickel-silver or gilt; ten inches long; in tin case; scaled in $\frac{1}{32}$ nds for temperature of 200° Fahrenheit. Weight about 6 ounces.

No. 3301B S. & M. *Tycos* Patent Salinometer..... **6.50**

Same as No. 3301, except square stem scaled on three sides for temperatures of 190°, 200° and 210° F. in $\frac{1}{32}$ nds. Weight about 6 ounces.

**Short & Mason *Tycos*
Meteorological and Other
Scientific Instruments**

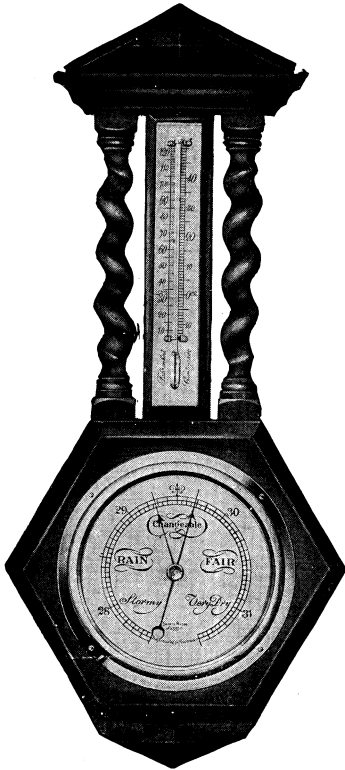
Furnished on Import Order
————— *only* —————

Manufactured by
Short & Mason, Ltd.
London, England

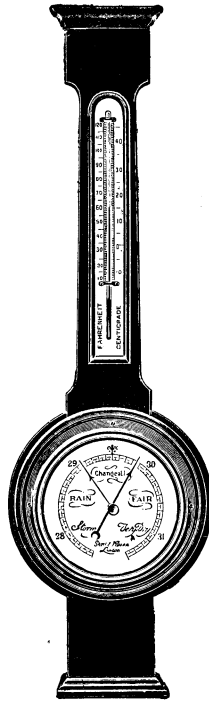


Short & Mason *Tycos* Period-Design Pendant Barometers

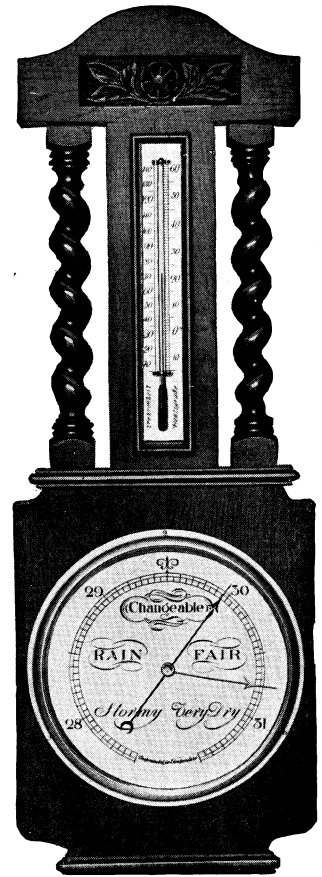
(English Manufacture; Supplied on Import Order Only)



No. 2409
(Reg. Design 708362)



No. 2410
(Reg. Design 695787)



No. 2411
(Reg. Design 695785)

These barometers are in handsome frames, original in conception, and all have best-quality compensated movements.

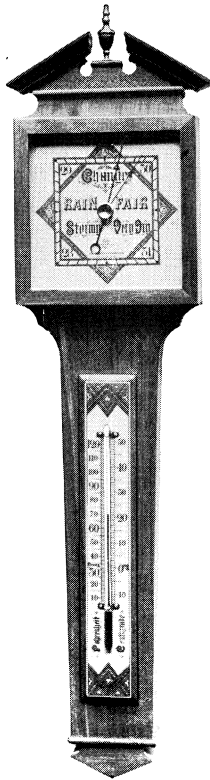
- | | | |
|--------------|---|-----------------|
| No. 2409-5" | S. & M. <i>Tycos</i> "Stuart" Pendant Aneroid Barometer | EACH
\$35.00 |
| | Oak frame, dark age-rubbed effect; antique-style lacquered dial 5 inches in diameter; thermometer scale to match, with red-liquid-filled tube; size over all 19" x 9". | |
| No. 2410-5" | S. & M. <i>Tycos</i> "Puritan" Pendant Aneroid Barometer | 35.00 |
| | Oak frame, dark-age-rubbed effect; antique-style lacquered dial 5 inches in diameter; thermometer scale to match; with red-liquid-filled tube; size over all 26" x 7½". | |
| No. 2410M" | Same as No. 2410-5" except mahogany frame and silvered dial and thermometer scale. | 38.00 |
| No. 2410-6" | Same as No. 2410-5", except with 6-inch dial. Size over all 31" x 9". | 40.00 |
| No. 2410M-6" | Same as No. 2410-6", except mahogany frame and silvered dial and thermometer scale. | 43.00 |
| No. 2411-8" | S. & M. <i>Tycos</i> "Jacobean" Pendant Aneroid Barometer | 55.00 |
| | Oak frame, dark age-rubbed effect; antique-style lacquered dial 8 inches in diameter; thermometer scale to match, with red-liquid-filled tube. Size over all 27" x 9½". | |

NOTE—Above barometers furnished with revolving altitude adjustment for setting to sea-level reading, for use in altitudes to 3500 feet. EXTRA \$5.00

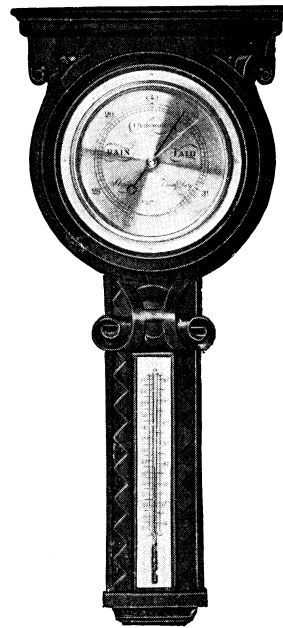


Short & Mason *Tycos* Period-Design Pendant Barometers

(English Manufacture; Supplied on Import Order Only)



No. 2400
(Reg. Design 71494½)



No. 2415
(Reg. Design 695788)

- | | | |
|-------------|--|-----------------|
| No. 2400-5" | S. & M. <i>Tycos</i> "St. James" Pendant Barometer | EACH
\$45.00 |
| | Dark dull-finished mahogany frame; brass-ornament pediment top; unique square dial (registered design) silvered; panel thermometer to match barometer dial; best-quality compensated movement; size over all 22½" x 6½". | |
| No. 2415-6" | S. & M. <i>Tycos</i> "Tudor" Pendant Barometer | 48.00 |
| | Dark age-rubbed oak frame; antique-style lacquered brass dial 6 inches in diameter; thermometer scale to match barometer dial, with red-liquid-filled tube; size over all 26" x 11½". | |

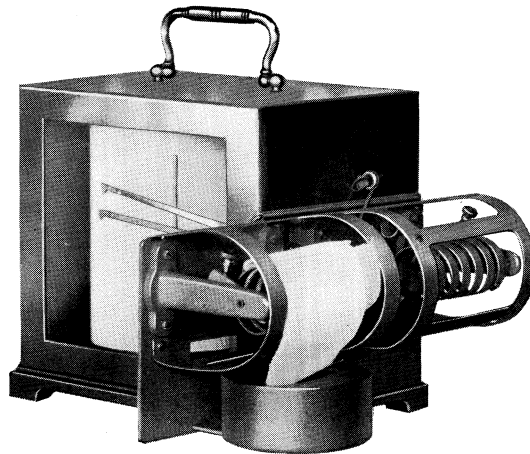
NOTE—Above barometers furnished with revolving altitude adjustment for setting to sea-level reading, for use in altitudes to 3,500 feet. EXTRA 5.00



Short & Mason *Tycos* Hygrographs

(Recording Wet-and-Dry-Bulb Thermometers)

(English Manufacture; Supplied on Import Order Only)



No. 2361

(About one-fourth actual size)

		EACH
No. 2361	S. & M. <i>Tycos</i> "M.O."-Pattern Hygrograph	\$145.00

This Wet-and-Dry-Bulb Recording Thermometer is used and recommended by the English Meteorological Office. It is similar to No. 2360, (page 53) but has two exposed laminas (one covered with silk wicking and leading to the water reservoir) each lamina actuating its own pen and recording respectively the "wet bulb" and "dry bulb" temperature.



Short & Mason *Tycos* Day-and-Night Compasses

(English Manufacture; Supplied on Import Order Only)



No. 2947



No. 2950

(Illustrations about two-thirds actual size)

No. 2947 S. & M. *Tycos* Improved "Magnapole" Compass ^{EACH} \$24.00

Has luminous vane on glass cover; mounted in rotating bezel; has side and check-stop action; radio-active permanent luminous dial and protractor; in sole-leather belt case. Each in a box. Weight about 7 ounces. It can be set for any required bearing at night. When set for the local magnetic variation, all readings can be made with reference to the "true north." Is so designed that it is impossible to make an error through miscalculation of the "true north" bearings with reference to the "magnetic" bearing.

No. 2950 S. & M. *Tycos* Combination Sight and Pocket Compass 24.00

Fluorescing aluminum dial reading to 360°, sub-divided in 2° luminous points; bronzed metal case; sole-leather belt carrying case; each in a box. Instructions for use. Weight about 7 ounces. Is designed for engineers, prospectors, explorers, hunters and woodsmen. Is an excellent instrument for determining direction in a trackless region. The sighting features allow the user to fix his line of advance quickly and accurately. The luminous points make it possible to use the compass for finding direction at night.

Short & Mason *Tycos* Verschoyle Patent Pocket Transit

(English Manufacture; Supplied on Import Order Only)



No. 3013

This instrument combines the useful features of Abney level, prismatic compass, and clinometer. Designed by a mining engineer of practical experience in the use and possible application of the various forms of instruments intended for preliminary survey.

The distinguishing feature of the instrument is that, owing to its novel construction only one observation is necessary to obtain both the magnetic bearing and the vertical angle of any distant point. It is specially adapted also for use in difficult positions, such as are always liable to occur in filling in the rougher details in a mining survey. For rapid topographical work and working in constrained positions. The fact that half the labor is saved should be of interest to those who have to use this class of instrument. Another important point is that its efficiency is not determined by the length of the diameter of the compass, as is the case with the ordinary prismatic compass. With even a small instrument the same length of sight is obtained as would be obtained with a 6-inch or 7-inch prismatic compass.

Weight of instrument	9 ozs.
Length	4½ in.
Width	3¾ in.
Depth	11/13 in.
Length of sight arm when opened	5½ in.
Length of needle	2¾ in.

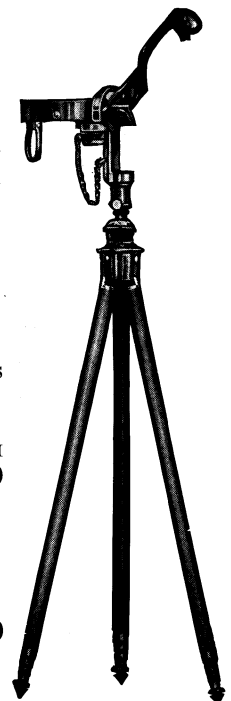
As a thoroughly serviceable instrument it is worthy of special notice.

It is not complicated and delicate, liable to derangement or deterioration.

There are no reflectors or mirrors used, other than the prism, which is protected and securely fastened.

No. 3013 S. & M. *Tycos* Verschoyle Transit for hand use..\$ ^{EACH} 75.00
Weight, 9½ ounces; in leather sling case.

No. 3014 Same as No. 3013, except with angle piece, collapsible metal tripod with ball-and-socket fitting, and sole-leather carrying case for tripod 100.00
Weight, 2¼ lbs.

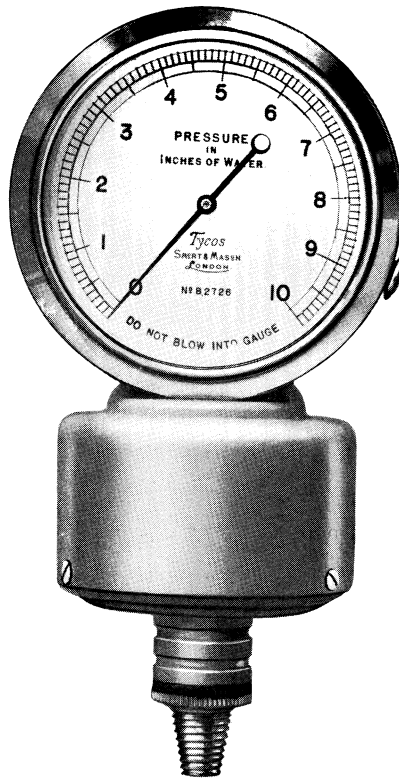


No. 3014



Short & Mason *Tycos* Portable Gas-Pressure Gauges

(English Manufacture; Supplied on Import Order Only)



No. 3410
(Actual size)

A reliable instrument, which does away with the inconveniences of liquid gauges. The graduated circle of divisions, showing the equivalent pressure in inches of water, is made to revolve by moving the projecting stud at the side of the instrument case. In this manner any slight deviation of the index hand from 0 may be adjusted easily. The instrument is then ready for use.

The gauge should be used in an upright position and attached to the supply pipe, under test, by the tapered screw socket supplied with it.

No. 3410	S. & M. <i>Tycos</i> Portable Gas-Pressure Gauge.....	EACH \$32.00
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Graduated 0 to 10-inch, or 0 to 25-inch, water pressure. In morocco carrying case. Weight about 11 ounces.



Short & Mason *Tycos* Improved Campbell-Stokes Sunshine Recorder

(English Manufacture; Supplied on Import Order Only)



No. 3500

(About one-third actual size)

For latitudes between 40° and 70°. No meteorological equipment is complete without a Sunshine Recorder.

No. 3500 S. & M. *Tycos* Improved Campbell-Stokes Sunshine Recorder . . . **\$280.00** EACH

Complete with sphere. Official pattern. Each in a box. Weight about 21 pounds.

No. 3501 Charts for No. 3500, (150 Summer Solstice; 150 Winter Solstice; 100 Equinoctial) **40.00**

Alphabetical Index

American Made

(Pages 4 to 37)

	PAGE
Altitude Barometers	6, 7
Anemometers, Zero-Setting	34
Auto-Altimeters	4, 5
Automobile Barometers	4, 5
Aviation Altitude Barometers	7
Bracket "Stormoguides"	12
Brass-Case Aneroid Barometers	14 to 18
Brass-Case "Stormoguides"	9
Compasses, (Pocket Magnetic)	24 to 31
"Cyclo-Stormograph" (Recording Barom- eters)	20
Dipping-Needle	32
Engine-Room or Yacht Barometers	19
Folding Feet for Brass-Case Aneroid Barometers	18
Glaisher's Rain Gauges	23
Instruction Chart for use with Aneroid Barometers	18
Levels, Improved Pocket Reflecting	33
Mercurial Barometers	35, 36
Meteorological Register Pads	18
Pendant "Stormoguides"	13
Rain Gauges	23
Stand "Stormoguides"	11
"Stormoguides"	8 to 13
"Stormoguide Junior"	10
Thermographs (Recording Thermom- eters)	21, 22
Weather Books	37
Yacht or Engine-Room Barometers	19
Yacht-Pattern "Stormoguides"	8

English-Manufacture—Carried in Stock

(Pages 40 to 55)

Airmeters and Anemometers	58 to 61
Abney's Levels	57
Anemometers, Electric Cup	58
Clinometer Compasses	64
Cylindrical-Brass-Case Weather Barometers	48
Desk Barometers, Aneroid	46

	PAGE
Dipping Needle (Miner's Compass)	63
Electric Cup Anemometers	58
Gas-Leak Indicators	62
Levels, Abney's	57
Marine Salinometers	65
"Micro-Barographs" (Recording Barom- eters)	51, 52
Miner's Compass (Dipping Needle)	63
Octagonal-Frame Aneroid Barometers	55
Pendant-Frame Aneroid Barometers	54
Pocket-Size Aneroid Barometers	44, 45
Pocket "Stormoguides"	43
Rain Gauges, Zero-Setting Register- ing, and Recording	56
Salinometers, Marine	65
Sight-and-Surveying Compasses	64
"Stormographs" (Recording Barom- eters)	49 to 52
"Stormoguide" Watch Size	43
Surveying Aneroid Barometers	47
Surveying and Sight Compasses	64
Thermometers	55
Thermographs (Recording Thermom- eters)	53
Traveling Sets, "Livingstone"	46
Watch-Size Aneroid Barometers	40 to 42
Weather Indicators, Watch Size	43

English Manufacture—On Import Only

(Pages 68 to 74)

Day-and-Night Compasses	71
Gas-Pressure Gauges	73
Hydrographs (Recording Hygrometers)	70
Period-Design Aneroid Barometers	68, 69
Sight and Pocket Compass, Combined	71
Sunshine Recorders, Campbell-Stokes	74
Transits, Verschoyle Patent Pocket	72



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We make a full line of instruments, aggregating several thousand types and styles, for indicating, recording and controlling temperature and pressure. They are covered by the following catalogs, any of which will be sent on request.

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- Part 2 —Instruments for Rubber Plants.
- Part 3 —Instruments for Textile Plants.
- Part 4 —Regulators of Temperature, Time, Temperature and Time, and Pressure.
- Bulletin 4DS—Recording Regulators.
- Part 5 —Instruments for Lumber Dry Kiln.
- Part 100 —Industrial Thermometers.
- Part 300 —Instruments for Refrigerating and Cold-Storage Plants.
- Part 500 —Instruments for the Food-Preserving Industries.
- Part 500A—Instruments for the Milk and Ice-Cream Industries.
- Part 500B—Instruments for Condensed, Evaporated and Powdered Milk Processes.
- Part 500P—Instruments for the Meat-Packing Industry.
- Part 600 —Instruments for Gas Plants.
- Part 700 —Instruments for Varnish Making, Oil Boiling, Asphalt Melting, etc.
- Part 700A—Instruments for Oil Tempering, Metal Baths, Tempering Ovens, etc.
- Part 800 —Instruments for Enclosed-Space Applications, such as Air Ducts, Ovens, Kilns, etc.
- Part 900B—Instruments for Bakers and Confectioners.
- Part 1300 —Hygrometers.
- Part 1400 —Engraved Thermometers.
- Part 1500 —Hydrometers.
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- Part 4000 —Radiation, Thermoelectric and Optical Pyrometers.
- Part 5000 —General Catalog of Tin-Case, Copper-Case, and Wood-Back Thermometers ; Hydrometers, etc.
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