

WATCH
AND
POCKET
ANEROIDS

Waltham Watch Co.

58 N. PEARL STREET
ALBANY, N.Y.

Tycos

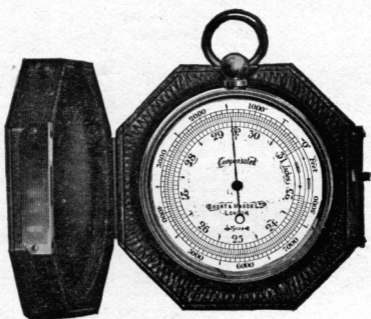
Watch and Pocket Aneroid Barometers

Manufactured by SHORT & MASON, Ltd., London

TO THE motorist, traveller or tourist the "Tycos" pocket Altitude Barometer is a most intensely interesting companion from the valuable and instructive data it affords, and is second only to the pocket camera in its capacity for adding pleasure and amusement.

As weather instruments the "Tycos" Watch and Pocket Aneroids are quite as reliable as barometers of the largest diameter. But, it is in measuring altitudes—the height of hills and mountains—wherein lies the chief source of pleasure and profit to the traveller. On foot or horseback, by motor or railway travel, the ascent or descent is indicated by the altitude scale as change in elevation takes place.

To the pedestrian, tourist or motorist any excursion doubles in interest and enjoyment with a "Tycos" Watch or Pocket Barometer as a travelling companion.



No. 2003
(Half Actual Size)

THESE instruments are fitted either with fixed or revolving altitude scales.

Fixed scales, however, are recommended as no adjustment is necessary when taking an altitude reading, whereas with the revolving scale type it is necessary to turn the scale until zero line is in conjunction with 31" of the Barometer dial.

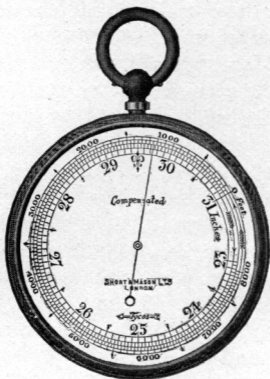
This adjustment is occasioned by the unequal division of the altitude scale: the inch or barometer scale is equally divided, while the altitude scale gradually diminishes in value as it ascends. The higher the altitude the more thin or rare the air becomes. A smaller quantity will fill a certain space above sea level than at sea level, diminishing as the altitude increases.

The earth's attraction draws each particle of air downward. The surface of the

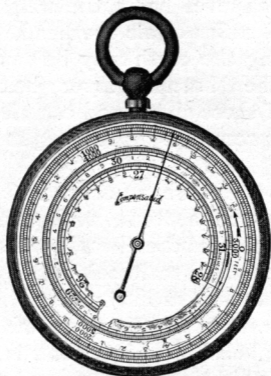
earth at sea level bears the weight of the miles and miles of air overhead. The air surrounding the earth may be compared to layers, the bottom layer bearing the burden of those above and each layer in its turn compressed by the weight of those overhead.

Hence the true relation between the barometer and altitude scale exists only when the zero of the altitude scale and 31" of the barometer scale coincide.

Tycos Barometers having fixed scales are set by means of a pointer which revolves inside the bezel. This pointer is set opposite the indicating hand when starting to make an ascent or descent. Any change in elevation during a journey or at its end



No. 2042
(Half Actual Size)



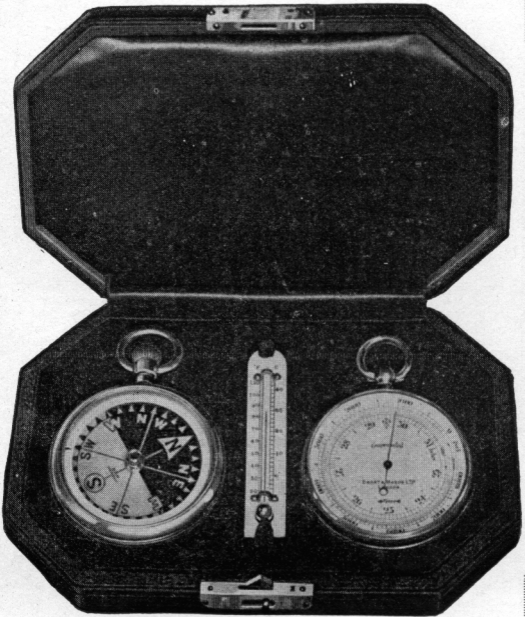
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(Half Actual Size)

will be the difference between altitudes as shown by the index and the indicating hand. For example—if the elevation at the start, as shown by hand on dial, be 900 feet the pointer is turned to that division of the scale. If at the end of an ascent the indicating hand on dial shows 2,500 feet the difference (1600 feet) measures the ascent.

In determining altitudes with the revolving scale type—having set the instrument by turning the altitude scale until its zero coincides with 31" of the barometer—note the division on the altitude scale coincident with the hand on dial.

The rise or fall in elevation between start and finish of a journey is computed in the same manner as with the fixed scale type.

The obvious advantage of the fixed scale is its permanent indication of the altitude at starting point, and the lessened liability to error in computation through failure to make a record of or forgetting the altitude at the start.



"LIVINGSTONE SET"
(Half Actual Size)

The following tables comprise the various altitudes covered by "Tycas" Watch and Pocket instruments and the value of scale subdivisions for each.

Diameters	1 $\frac{3}{4}$ " Divided to	2 $\frac{1}{2}$ " Divided to	2 $\frac{1}{2}$ " Double Circle Divided to
3,000 ft. . .	10 ft.	10 ft.
5,000 ft.	5 ft.
8,000 ft. . .	50 ft.	50 ft.
10,000 ft. . .	100 ft.	50 ft.
12,000 ft. . .	100 ft.	50 ft.
16,000 ft. . .	100 ft.	100 ft.

PRICES IN GILT METAL CASE

With revolving rim action to altitude scale, or with fixed altitude scale. Each in satin-lined snap morocco case.

	1 $\frac{3}{4}$ "	2 $\frac{1}{2}$ "
3,000 ft.	\$21.35	\$22.60
8,000 ft.	19.25	20.50
10,000 ft.	20.10	21.35
12,000 ft.	20.95	22.20
16,000 ft.	22.55	23.80

The "Tycas" "Repeating Circle" Pocket Aneroid requires the indicating hand to travel twice around the dial to cover its full altitude range of 5,000 feet. This extended scale permits of five feet subdivisions and by careful observation can be made to even smaller values.

Repeating Circle Pocket Altitude Barometer, 5000 feet in pig skin satin-lined case. Each \$50.

LIVINGSTONE SET

Comprising best quality, 1 $\frac{3}{4}$ inch watch size, Aneroid Barometer to 8,000 feet in 50 feet divisions, compensated for temperature, with full size compass to match, with Thermometer in center, in best morocco case. Each \$33.75.

COMPENSATION

All *Tycas* best quality Watch and Pocket Aneroids are compensated for change in temperature. This is accomplished by brazing a piece of steel to the "main lever," which is made of brass, and since the expansion of steel is less than brass when change in temperature occurs the non-expanding steel strip tends to hold in check the brass arm, and causes it to curve slightly and maintain the distance between the two ends, and the leverage is not affected, while with non-compensated instruments changes in temperature are a source of material error.

Tycas Altitude Barometers are made in two sizes, $1\frac{3}{4}$ " and $2\frac{1}{2}$ " diameter. The pocket size $2\frac{1}{2}$ ", by means of its larger dial, admits of more open scale graduation for the same altitude range than the watch size $1\frac{3}{4}$ ", as well as carrying a larger vacuum chamber and movement.

Are You Interested

————— **in** —————

Recording Barometers

Recording Thermometers

Rain Gauges

Compasses

House Barometers

Motor Barometers

Yacht Barometers

Library Barometers

or

Presentation Barometers?

ask for

“The Barometer Book”

PUBLISHED BY

Taylor Instrument Companies

*Largest Makers of Thermometers for all
Purposes, Barometers and other
Meteorological Instruments*

ROCHESTER, NEW YORK