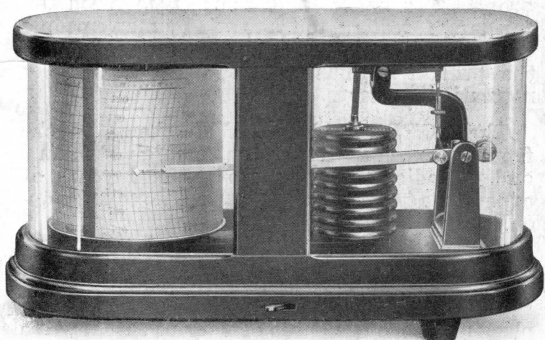


GOERZ



Goerz Barograph

***Barographs
Thermographs
Thermohygrographs***

For Sale by

C. P. Goerz American Optical Co.

317 East 34th Street, New York, N. Y.

Goerz Barograph

The use of a recording barometer is not only a necessity to the meteorologist and other scientists, but its value as a "weather prophet" is more and more recognized by farmers, foresters, tourists and by many people who are either dependent on the weather in the pursuit of business or of pleasure and recreation outdoors.

The GOERZ BAROGRAPH, shown on the front cover, is an instrument of high standard and embodies the results of several years of experience in the manufacture of precise meteorological apparatus.

It is designed for continuous performance and its mechanism is therefore of new and sturdy construction. The oval shape is not only pleasing to the eye but is of very practical value as it allows an unobstructed view of over three quarters of the recording drum. A series of vacuum discs of correct design, and made of the most suitable material, are of the same high standard as those which have won for Goerz such high reputation as manufacturer of thousands of air pressure measuring instruments, used on airplanes, dirigibles and elsewhere.

The use of the clear unbreakable cellon instead of the usual glass windows in the cover of the barograph is another exclusive feature of the Goerz instrument. The base and cover frame are made of selected stained oak; polished mahogany or other hardwood frames can be furnished on special order and at an additional cost.

Price of the complete instrument,
including 1 set of charts for one year,

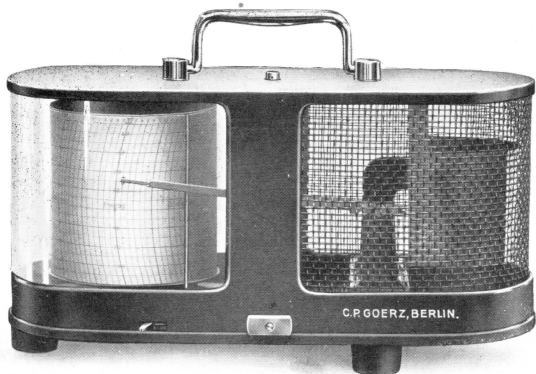
either inches or millimeter reading,
\$60.00.

Extra set of charts \$2.50; extra
bottle of ink \$0.50; extra pen \$0.75.

(Directions for setting up will be found on
the back of this pamphlet.)

Goerz Thermograph

A visible record of temperature conditions
and changes is a necessity in agricultural and



Goerz Thermograph

chemical laboratories, in the hospital, in plant
nurseries and in many other places where an
unsuitable temperature may affect the health
of persons or the growth of plant life and the
quality of goods in course of manufacture.

But also in the office, in the clubroom and in
the home is it desirable to have such written

records of temperature changes during the twenty-four hours of the day.

The GOERZ THERMOGRAPH is a recording thermometer that will meet the most exacting requirements of the scientist, the manufacturer and the medical profession. The general form of the instrument and the construction of its writing mechanism is the same as that of the barograph. The thermo-element is of approved bi-metal type, fully protected when the cover is in place, yet sensitive to the slightest changes in temperature because the wide wire-mesh of the cover allows a free circulation of the surrounding air. The base and cover are made entirely of metal, nicely japanned in olive green with nickeled trimmings, the window surrounding the recording drum is also made of unbreakable cellon. The cover fastens to the base by a snaphook, provision is also made for sealing the instrument against meddling by unauthorized persons. The whole instrument may safely be carried about by a substantial handle at the top of the cover.

Price of complete instrument including 1 set of recording charts, either Fahrenheit or Centigrade scale, \$66.00.

Extra set of charts \$2.50; extra bottle of ink \$0.50; extra pen \$0.75.

Goerz Thermohygrograph

As it is often of importance to have a continuous record not only of the temperature, but also of the moisture contained in the air, the thermohygrograph has been designed.

This instrument is of identical construction with the one described before, with the addition

of a hygrometric element. This element consists of a double strand of human hairs, connected to a sensitive lever arrangement which in turn moves the writing pen arm over a scale on the bottom of the chart. This scale gives the moisture in percent from 20 to 100, the latter indicating the "saturated" condition.

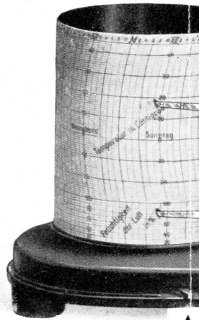
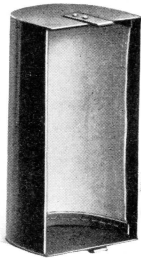
Both, thermo—as well as hygrometric, elements are protected against sudden drafts by a surrounding shield which, being fastened to the cover, is removed with the latter. In this way the elements are easily accessible with the cover off.

An adjustment of the hygograph may become necessary at intervals of two or three months. For this purpose a "saturating" cell is furnished with the instrument. This consists of a curved metal shield which is lined on the inside with cotton gauze. This gauze having been soaked with water, the shield is placed over the hygrometric element, completely surrounding it. After about five minutes the indicator arm should point to the 100 mark of the chart and if this is not so, a slight turn, either to the right or left, of the little nut of the connecting screw link, forming one of the levers, will cause the pen to move to the desired position. After removing the saturating cell, any water drops, having formed on the metal parts, should be drawn off with a little blotting paper.

Price of the complete instrument, including 1 set of charts, either Fahrenheit or Centigrade scales, \$90.00.

Extra set of charts \$2.50; extra bottle of ink \$0.50; extra pen \$0.75.

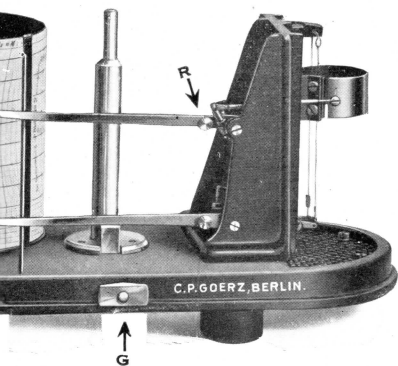
(For general directions for setting up of these instruments see back pages of this pamphlet.)



Goerz Thermograph
(Cover removed)

Directions for setting up Goerz Recording Instruments

- (1) The metal cover of the thermograph and the thermohygrograph is locked to the base by means of snap hooks. By pulling on the knob "G" the cover becomes unlocked and may now be removed by sliding upwards. The cover of the barograph does not lock and may be removed by simply lifting it off.
- (2) For transportation purposes some of the parts are wrapped in tissue paper. Remove this paper carefully and dust all parts by means of a soft camel hair brush. Do not oil any part of the instrument except occasionally the center pin which acts as guide post for the cover.
- (3) See that the pen is out of engagement



hygrometer
(removed)

with the drum by moving lever "H" in the base towards the right. Now remove drum after unscrewing knurled thumb-screw, wind clock and place chart on drum. See that chart touches evenly lower rim of drum and that the overlapping ends of the paper come under the brass spring clamp. The clock, running 8 days with one winding, comes properly adjusted to revolve the drum in accordance with the hour lines of the chart. Should the clock begin to run slow or fast, the adjustment of the escapement may be effected by opening the little slide on top and shifting, by means of a suitable pointed pin, the indicator, situated some distance underneath, slightly to right or left.

- (4) Replace drum carefully in approximate position, replace the center knob and turn

drum until pen point is opposite the correct time line. Now bring pen in contact with the paper by moving lever "H" to the left. After every change of the chart put a small drop of the special ink into the reservoir of the pen. The pen should be cleaned from time to time by means of a small hair brush dipped in alcohol. By a slight motion of the pen make sure that it writes properly.

- (5) The pen should bear with the lightest possible pressure against the paper. This may be regulated by turning screw "R." When inclining the whole instrument about 45 degrees towards the front the pen by its own weight should fall about $1/32$ " away from the paper.
- (6) Readjustment of the pen indicator arm may become necessary if a comparison with a standard mercury thermometer or barometer should show a difference in the reading of the thermograph or barograph. To adjust the difference, it is only necessary to turn the nut of the little connecting screw link, forming one of the levers, to the left or right which adjustment will cause the long penholder to rise or fall to the desired reading.

To effect the adjustment on the barograph, it is advisable to take a barometer reading, adjusted to sea level, because the weather reports of practically every weather bureau all over the world are based on sea level readings.