

Thermometers
Hydrometers
Hygrometers



PART 4



HERMOMETERS

FOR

BREWING
BEER BOTTLING
DISTILLING
MALTING

The Hohmann & Maurer Mfg. Co.

ROCHESTER, N. Y.

LONDON, E. C.
106 Hatton Garden.



NEW YORK:
85 Chambers Street.



IN THE MANUFACTURE of Beer, in Malting and in Distilling nearly every process is dependent for best results upon *correct* temperature regulation. Keen competition for trade, coupled with the adoption of more scientific and economic methods, especially in Ale and Lager Beer brewing, has rendered accuracy of the *Technical Instruments* employed of the utmost importance. In the old days, when "rule of thumb" methods were in vogue, but little attention was given to the exactness of Thermometers and Sacchrometers, approximate accuracy being deemed sufficient for all practical purposes, whereas to-day the highest degree of accuracy in all Technical Instruments is demanded by progressive and successful manufacturers.

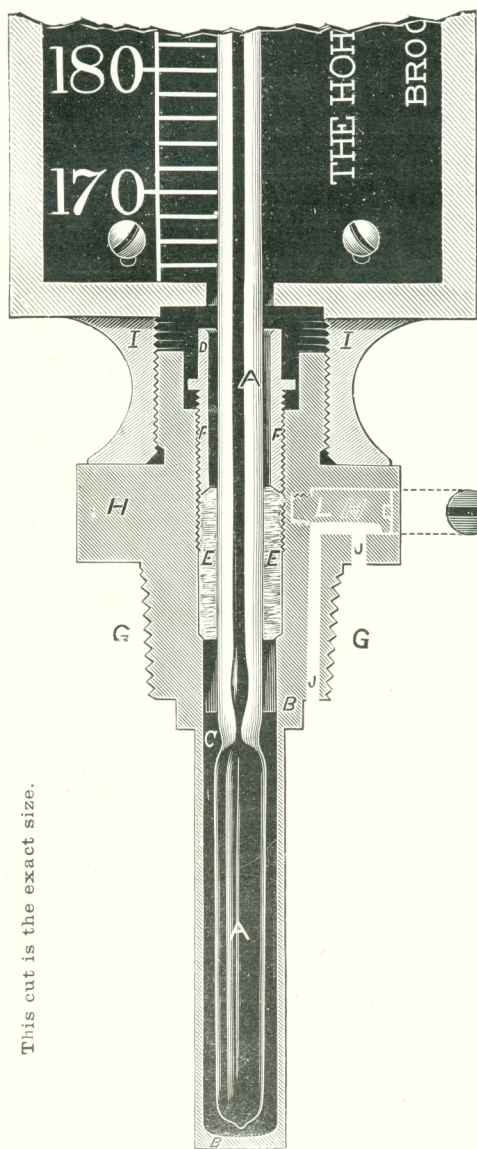
From the time of our advent in the manufacture of high-grade Thermometers we have sought the consumer, and we feel that our success is attributable more to the practical knowledge we have acquired of the processes of manufacture employed in the various industries, where the proper regulation of temperature is an important factor, than to any other source, our first step in every new field being to find out what a Thermometer is expected to accomplish, study the conditions under which it must be used, and then construct the Thermometer to meet those requirements.

In compiling this list we have endeavored to have it cover all the requirements in Brewing, Distilling and Malting. For purposes other than those specified herein we have other catalogues, and invite the correspondence of manufacturers in every line interested in Temperature Regulation.

The Rohmann & Maurer Mfg. Co.

NOTE.—Thermometers for Ice Manufacture and Refrigeration are listed in separate catalogue, part 3.

Detailed Description of the H. & M. Thermometers,



This cut is the exact size.

Fig. 1.

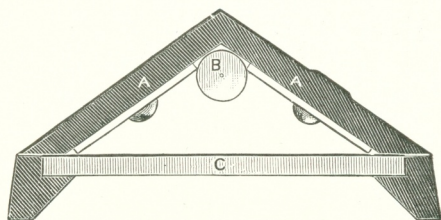


Fig. 2.

Showing Mercury Bath, Packing, Shape of Frame, Steam Vent and Black Dial.

This same construction, with slight variations, applies to all instruments of this character listed herein.

Fig. 1 gives a sectional view, illustrating the construction of the mercury bath and the entire lower portion exposed to the steam or heat.

A A Is the thermometer tube with sensitive cylindrical bulb.

B B Is the hollow metallic stem, containing the mercury bath and enclosing the bulb of the thermometer tube.

C C Is the mercury filling, forming the mercury bath, and serving as a conducting medium of the temperature.

D Is the packing screw.

E E Is the stuffing box with the packing in it.

F F Is the thread of packing screw

G G Is the fitting for securing instrument into pipe, etc.

H Is the hexagon head or shoulder upon which wrench is used.

I I Is the upper part of frame which encloses the tube and scale

J J is the steam circulation vent, which can be opened to create an artificial circulation of live steam around the bulb of the instrument to insure accurate indications of the temperature and pressure.

Fig. 2 gives an end view of the top frame or scale-case cut across.

A Is the bronze metal casting showing shape and thickness.

B Is the thermometer tube (referred to as AA in the above description.)

C Is the heavy removable glass plate sealing the scales and thereby preventing corrosion and adding very largely to the life of the instrument.

Description of Union Connection.

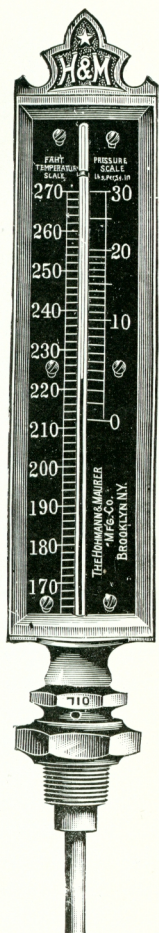


Fig. B-8.

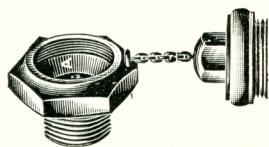


Fig. P-7.

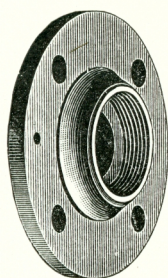


Fig. P-13.

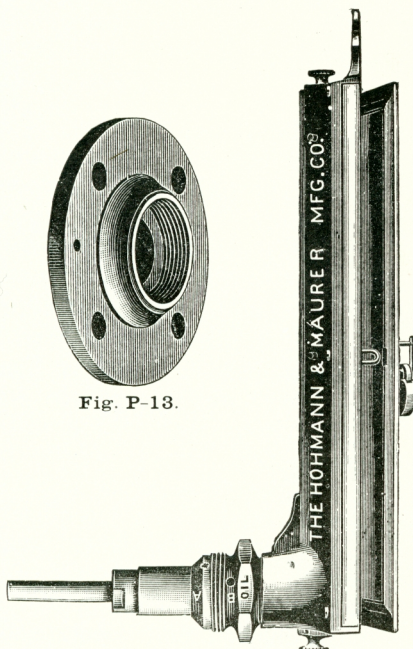


Fig. B-12.

Fig. B-8 shows the straight Thermometer complete with Hub and Union Connection.

Fig. P-7 shows the Threaded Hub with and without Cap attached, "A" indicating the seat for making water or steam joint, no packing being required.

Fig. P-13 shows a Flange Union Connection for use on Mash Tubs when there is not sufficient room between the Rake and inside of tub to permit of using the P-7 Connection.

Fig. B-12 shows the Angle Thermometer without the threaded hub. "A" indicates the Union Connection with its thread and seat.

The Cap is employed to screw into the Hub and close the opening should the

Thermometer be taken out. It is furnished upon application only.

To attach this Thermometer, the Hub is first screwed into the pipe or apparatus, then the stem of the Thermometer is inserted into the Hub, the Scale-case being held vertically, while the Union Nut or Coupling is screwed up with the fingers or small wrench until both seats are brought together, when the joint will be found steam or water-tight and the Thermometer secured.

We recommend this Union Connection for both Straight and Angle Stem Thermometers, as it relieves the instruments of all wrenching strains, jars or slips, and in the case of the Angle Stems obviates the necessity of swinging around the Scale-case, which often times cannot be done, because of location of pipe or surrounding fixtures.

A feature of the Straight Stem instrument is that the Scale-case can be turned in any direction to suit changing light.

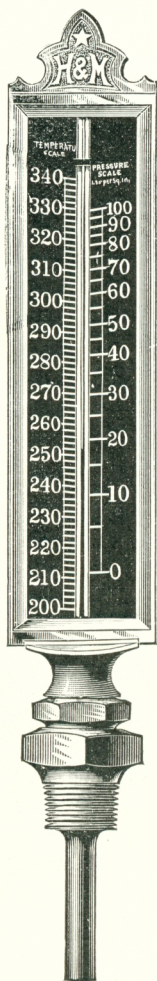


Fig. B-14.



Fig. B-15.

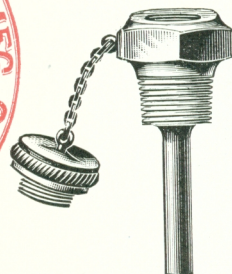


Fig. P-8.

Description of Separable Feature.

The Socket or Well is closed on the lower end, so that no steam or water can pass through when Thermometer is taken out, the Cap only being used to keep out the dirt or grit, which would injure the usefulness of the instrument.

The Socket is first screwed into the apparatus, and is intended to remain in permanently, then the Thermometer is inserted and secured by screwing down the Union Nut, which will seat it properly, this can generally be done with the fingers or with a small wrench, no wrenching being required the instrument is relieved of all strain in attaching. The face or scale can be turned in any direction desired. Should the mercury at any time separate in a Thermometer having the separable feature while

in use, it can be easily remedied, and quickly connected by unscrewing the Union Nut, taking the Thermometer out of its Socket, inverting it and running the mercury forward, when the particles will unite and the Thermometer can again be replaced, all of which can be done in a few minutes and without shutting off water or steam.

There is no filling required in this Socket or Well, as there is a close contact taper seat between the stem of the Thermometer and the shell of the socket, insuring the instantaneous transmission of the heat without any loss, so that the indications are absolutely accurate.

The two parts are machined to exact and accurate measurements, and are therefore interchangeable. This will permit the use of one Thermometer with any number of Sockets, which will be found advantageous where it may be desirable to make occasional tests in different parts of a plant.

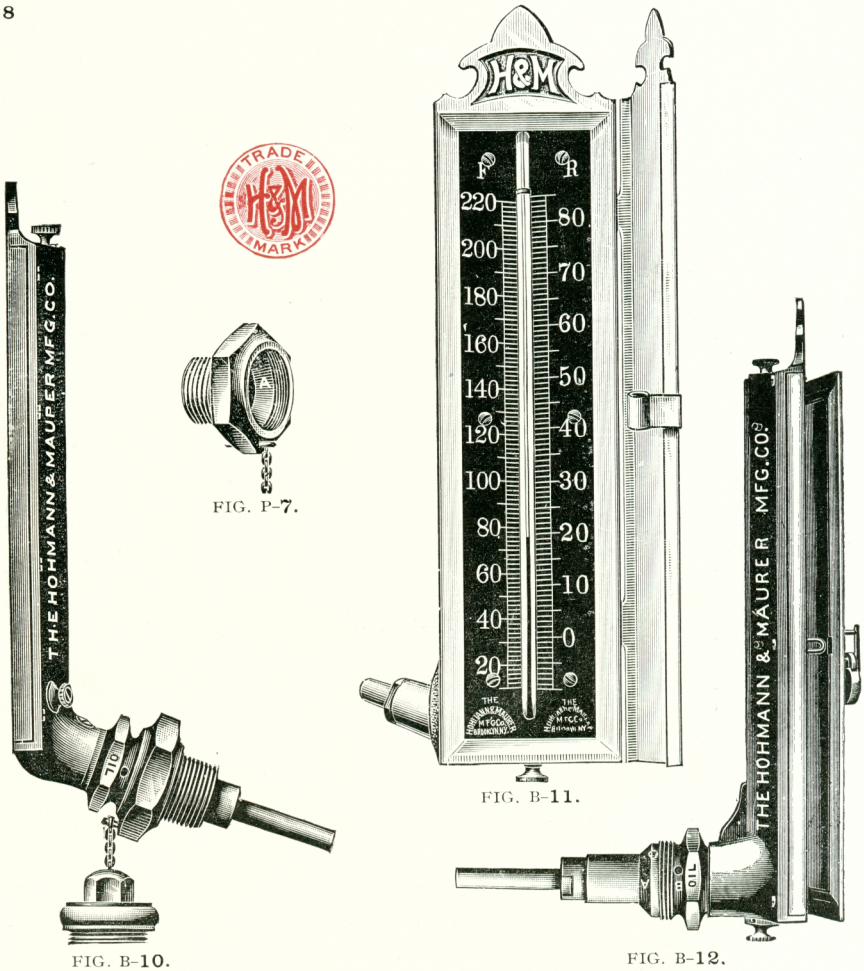
For Marine Engineering, especially on war ships, this Separable Interchangeable feature will be found of great value and usefulness.

TABLE OF SPECIFICATIONS.

The following table contains the specifications of all pipe-threaded regular pattern Short Stem H. & M. Improved Standard Thermometers and Thermo-Steam Gauges. All connections are for Standard Pipe Fittings. All Angle Thermometers are made with either Separable Socket or Union Connection :

PATTERNS.	LENGTH OF SCALE CASE.	DESCRIPTION.	SIZE OF THREAD.			LENGTH OF THREAD.	STEM EXTENDS BELOW THREAD.		TOTAL LENGTH.		WIDTH OF SCALE CASE.	SPACE BETWEEN BACK OF SCALE CASE AND SHOULDER OF THREAD.
			Threaded Connection.	Union Connection.	Separable Socket.		Threaded or Union Connection.	Separable Socket.	Threaded or Union Connection.	Separable Socket.		
	INCH.		INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.
A	5	Straight	$\frac{1}{4}$ & $\frac{1}{2}$	.	.	$\frac{1}{2}$	1 to $1\frac{1}{2}$	.	$9\frac{1}{2}$	.	$1\frac{3}{4}$	.
	5	Angle	$\frac{1}{4}$ & $\frac{1}{2}$	.	.	$\frac{1}{2}$	1 to $\frac{1}{2}$	.	$6\frac{1}{2}$	.	$1\frac{3}{4}$	.
	7	Straight	$\frac{1}{2}$ & $\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$ & 1	$\frac{5}{8}$	$1\frac{1}{2}$ to $2\frac{1}{2}$	$2\frac{1}{2}$	$12\frac{1}{2}$	17	2	.
A	7	Angle	$\frac{1}{2}$ & $\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$ & 1	$\frac{3}{4}$	$3\frac{1}{4}$	$2\frac{1}{2}$	9	9	2	$1\frac{3}{4}$
B	9	Straight	$\frac{3}{4}$ & 1	1	1	$\frac{3}{4}$	$2\frac{3}{8}$	$2\frac{1}{2}$	15	$16\frac{1}{2}$	$2\frac{1}{2}$	.
B	9	Angle	1	1	1	$\frac{3}{4}$	$2\frac{3}{8}$	$2\frac{1}{2}$	11	11	$2\frac{1}{2}$	2
C	10	Straight	1	1	1	$\frac{3}{4}$	$2\frac{3}{8}$	$2\frac{1}{2}$	17	18	$2\frac{1}{8}$	.
C	10	Angle	$1\frac{1}{4}$ & $1\frac{1}{4}$	1	1	$\frac{3}{4}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$13\frac{1}{4}$	$13\frac{1}{4}$	$2\frac{1}{8}$	2
D	12	Straight	$1\frac{1}{4}$ & $1\frac{1}{4}$	$1\frac{1}{4}$ & $1\frac{1}{4}$	$1\frac{1}{4}$ & $1\frac{1}{4}$	$\frac{3}{4}$	3	3	21	$2\frac{3}{4}$	.	
D	12	Angle	$1\frac{1}{4}$ & $1\frac{1}{4}$	$1\frac{1}{4}$ & $1\frac{1}{4}$	$1\frac{1}{4}$ & $1\frac{1}{4}$	$\frac{3}{4}$	3	3	$16\frac{1}{4}$	$16\frac{1}{4}$	2	

NOTE.—7 inch straight and angle separable socket instruments have sockets with extension neck $3\frac{1}{2}$ inches long, inclusive of thread and wrench head.



Mash Tub and Hot Water Tank Thermometers.

ANGLE STEMS—9-INCH SCALE CASES.

(For general description of construction, see pages 4 and 5. For measurements, see page 7.)

All H. & M. Angle Stem Instruments are provided with our special "Union Connection" and Fittings cut with Standard Pipe Thread.

The advantage of this method for attaching Thermometers to Mash Tubs, Hot Water Tanks, Fermenting Tubs, Cookers, and all apparatus requiring frequent cleaning, will appeal to every practical brewer on account of the facility with which the Thermometer may be detached when occasion requires. No tools but the fingers are needed, whereas the old style attached by lock nuts required the services of two men with wrenches, and incurred great risk of breakage through strain in attaching.

No. 458.	Figs. B-12 and P-7—9 inch scale case, with door, right angle stem, 60-220° F. and R.	EACH. \$ 27 00
No. 459	Figs. B-12 and P-7—9 inch scale case, without door, right angle stem, 60-220° F. and R.	22 50
<i>The above instruments are also used on Hot Water Tanks.</i>		
No. 460.	Fig. B-10—9 inch scale case, with door, obtuse angle stem, 60-220° F. and R.	30 00
No. 461.	Fig. B-10—9 inch scale case, without door, obtuse angle stem, 60-220° F. and R.	25 50

RICE TUB THERMOMETERS.

No. 462.	Figs. B-12 and P-7—9 inch scale case, with door, right angle stem, 20° to 120° Reaumur, 50 lbs. pressure	27 00
No. 463.	Figs. B-12 and P-7—9 inch scale case, without door, right angle stem, 20° to 120° Reaumur, 50 lbs. pressure	22 50

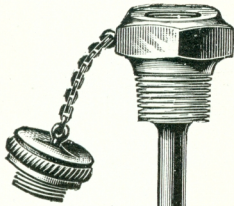


FIG. P-8.

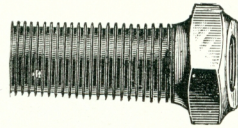


FIG. P-7 1/2.

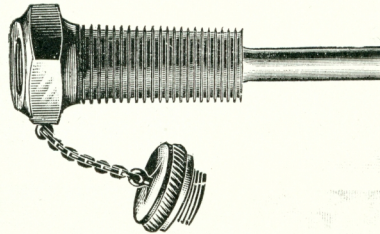


FIG. P-30.

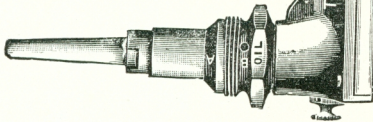


FIG. B-16.

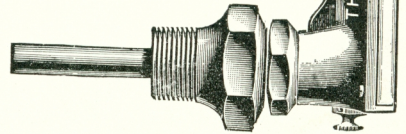


FIG. B-17.

Wood Tub and Tank Thermometers.

ANGLE STEMS—9-INCH SCALE CASES.

For Wood Mash Tubs or Hot Water Tanks we supply a special fitting (Fig. P-7 1/2), with coarse, sharp thread, easily screwed into a straight, smooth hole bored through stave, neither lock nut or washers being required in attaching.

No. 464.	Figs. B-12 and P-7 1/2—9 inch scale case, with door, right angle stem, 60 to 220° F. and R.	EACH.
No. 452.	Figs. B-16 and P-30—9 inch scale case, with door, right angle stem and separable socket, 60 to 220° F. and R.	\$ 27 00
		30 00

NOTE.—For description of Separable Socket (Fig. P-30), see page 6.

High Pressure Cooker Thermometers.

(Used by Rach's Mashing Process Co.)

No. 453.	Fig. B-12 and P-7 1/2—9 inch scale case, with door, right angle stem, 20 to 120° R, 50 lbs. pressure	27 00
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Separable Socket Hot Water Tank Thermometers.

No. 466.	Figs. B-16 and P-8—9 inch scale case, with door and separable socket, right angle stem, 60 to 220° F. and R.	EACH
No. 467.	Figs. B-16 and P-8—9 inch scale case, without door and separable socket, right angle stem, 60 to 220° F. and R.	\$ 30 00
		27 00

Mash Pipe Thermometers.

No. 468.	Figs. A-9 and P-7—7 inch scale case, right angle stem, scale 60 to 220° F. and R.	20 50
No. 469.	Figs. B-12 and P-7—9 inch scale case, right angle stem, scale 60 to 220 F. and R.	22 50

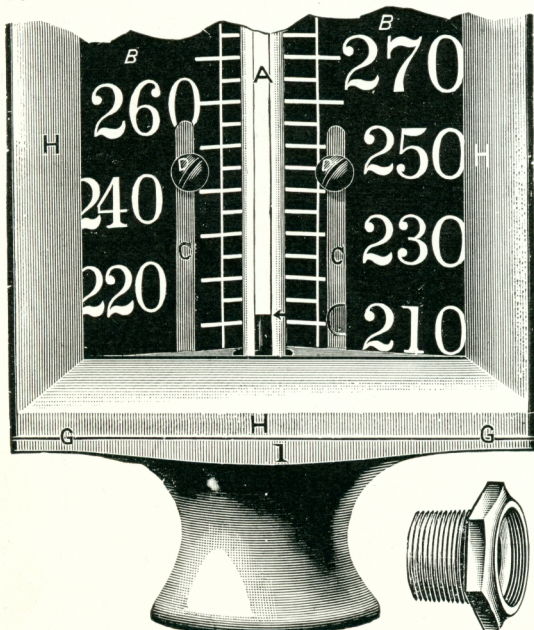


Fig. P-21.
Full size Sectional view
of 12" Scale Case.

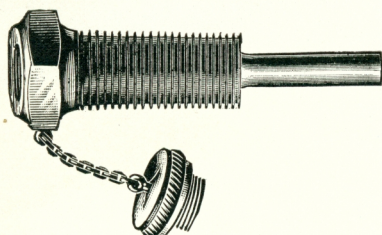


Fig. P-30.
Separable Socket for wood tub.

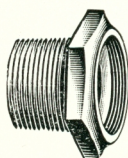


Fig. P-11.
Bushings for
12" Union Con-
nection Ther-
mometer.

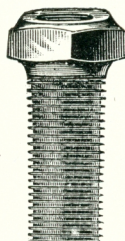


Fig. P-11 1/2.
Bushings for wood tub.

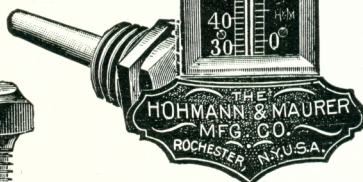


Fig D-6.

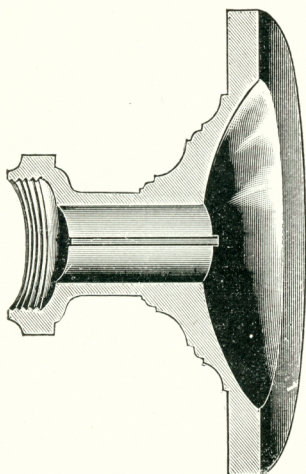


Fig. P-17 1/2.
Sectional view of Brewer's
Concaved Mash Tub Flange.

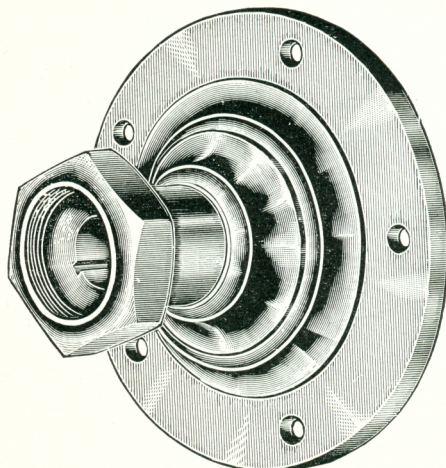


Fig. P-17.
Concaved Flange for Brewer's
Mash Tub.



Mash Tub Thermometers.

ANGLE STEMS—12-INCH SCALE CASES.

The advantages of the 12-inch Scale Case Thermometer for Mash Tubs, Hot Water Tanks and Kettles are that it permits using larger figures and more open scale graduation, is easier to read, and changes in temperature are more quickly detected.

(See Fig. P-21, Page 10, for full size sectional view.)

	EACH.
No. 458. Figs. D-6 and P-11—12 inch Scale case, with Door, Right Angle Stem, 60° to 220° F. and R. . . \$	31 50
No. 459. Figs. D-6 and P-11—12 inch Scale case, without Door, Right Angle Stem, 60° to 220° F. and R. . .	27 00

NOTE.—Fig. P-17 is a special flange fitting with concave face, as shown in sectional view (P-17½), and is designed for use on mash tubs having rakes which revolve so close to the sides as to prevent the stem of the Thermometer extending far enough inside of Tub to insure correct temperature indications. The concaved surface of flange forms a part of the tub, fills with the mash, which surrounds the Thermometer stem, and accurate readings result.

	EACH.
No. 455. Figs. D-6 and P-17—12 inch Scale case with Door, Right Angle Stem and Concave Flange . . \$	37 50

SEPARABLE SOCKETS.

(See page 6 for description and advantages of Separable Sockets.)

No. 470. Figs. D-6 and P-8—12 inch Scale case with Door and Separable Socket, Right Angle Stem, 60° to 220° F. and R.	36 75
No. 471. Figs. D-6 and P-8—12 inch Scale case, Separable Socket, without Door, Right Angle Stem, 60° to 220° F. and R.	32 25

12-INCH SCALE CASE THERMOMETERS FOR WOOD TUBS.

(For description of fitting for wood tubs, see page 9.)

	EACH.
No. 472. Figs. D-6 and P-11 ½—12 inch Scale case, with Door, Right Angle Stem, 60° to 220° F. and R. . . \$	31 50
No. 473. Figs. D-6 and P-30—12 inch Scale case, with Door, Right Angle Stem and Separable Socket, 60° to 220° F. and R.	36 75

NOTE.—Add for lock and key to Thermometers having doors \$2.25.

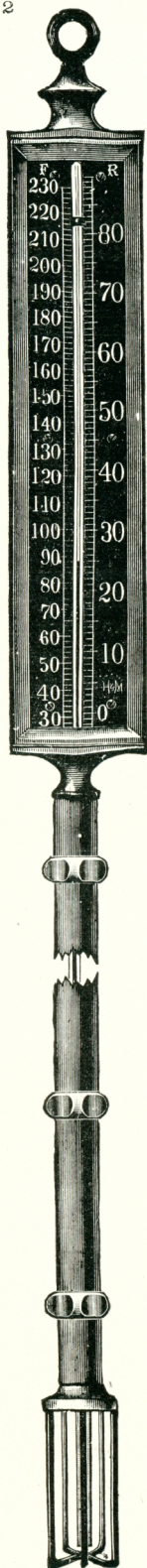


FIG. D-20 1/2.

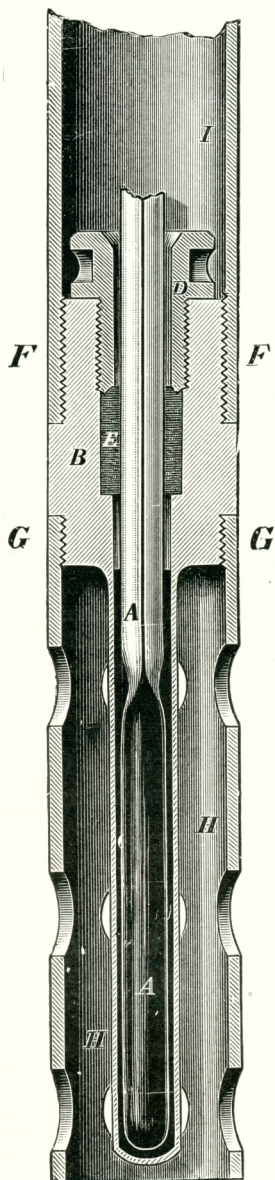
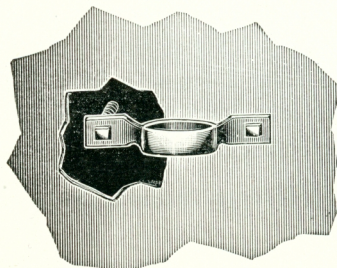
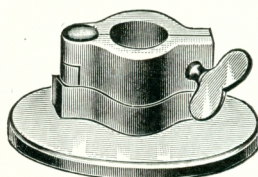
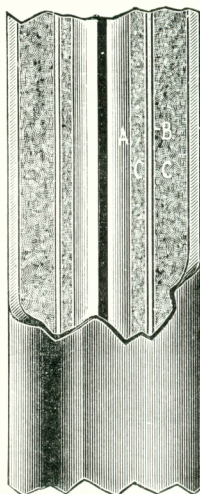
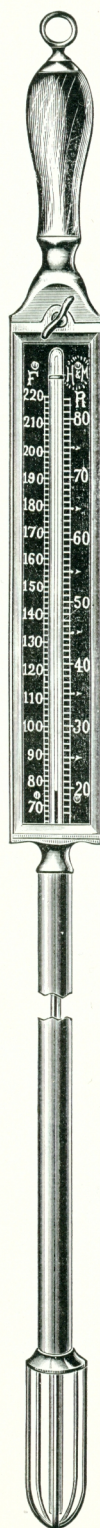
FIG. P-23.
Sectional View of Mer-
cury Bath and Guard.FIG. P-31.
Section of Mash Tub showing device for
holding Long Stem Thermometer.FIG. P-24 1/2.
Adjustable Clamp Flange
to hold Long Stem Mash
Tub Thermometer.FIG. P-32.
Sectional View of
Insulated Stem.

FIG. C-10.



Long Stem Mash Tub Thermometers.

The essential feature in the manufacture of long stem Thermometers to insure accurate temperature indications is in the construction of the stem.

The varying depths of the mash, and the difference in temperature existing at different levels in the tub, requires that the stem of the Ther-

monometer tube shall be so insulated in its casing that it will not be affected by these varying conditions of temperature, or the instrument will not indicate the true temperature of the bulb exposure. Our method of insulation (covered by letters patent) is illustrated in Fig. P-32, "A" being the Thermometer tube, "B" a glass casing covering the Thermometer tube and its insulation, "C" "C" the insulation between the glass casing and the thermometer tube, and filling the space between the glass tubing and the outer brass or copper casing "D."

NOTE.—Fig. P-31 is an illustration of a special fitting which we supply with long stem Mash Thermometers, when, by reason of the close proximity of the rake to side of tub, it is necessary that the Thermometer be suspended close to side and clear of the rake, two or more being furnished with each Thermometer, according to the length of its stem; the space required for Thermometer and fitting being but 1½ inches.

NOTE.—Fig. P-24½ is an illustration of an adjustable clamp flange furnished with all long stem Mash Thermometers for supporting the Thermometers in the tub and regulating the depth to which the stem should extend into the mash.

	EACH.
No. 401. Figs. D-20½ and P-24½—12 inch Aluminum Scale-case, 48 inch stem, 60° to 220° F. and R. . . \$	27 00
No. 402. Figs. D-20½ and P-24½—12 inch Aluminum Scale-case, 60 inch stem, 60° to 220° F. and R. . .	31 00
No. 403. Figs. D-20½ and P-24½—12 inch Aluminum Scale-case, 72 inch stem, 60° to 220° F. and R. . .	36 00
No. 404. Figs. D-20½ and P-24½—12 inch Aluminum Scale-case, 84 inch stem, 60° to 220° F. and R. . .	41 00
No. 405. Figs. D-20½ and P-24½—12 inch Aluminum Scale-case, 96 inch stem, 60° to 220° F. and R. . .	51 00

The above listed prices are for instruments without doors; if door is wanted, add \$4.50 to list price.

Hand Mash Tub Thermometers.

	EACH.
No. 406. Fig. C-10—10 inch Aluminum Scale-case with handle, 14 inch stem, 60° to 220° F. and R. . . . \$	18 00
No. 407. Fig. C-10—10 inch Aluminum Scale-case with handle, 24 inch stem, 60° to 220° F. and R. . . .	22 50



Long Stem Hand Fermenting Tub Thermometers.

In the construction of this Thermometer we have aimed to obtain extreme sensitiveness, lightness of materials, yet strength of combined parts, an open, easy reading scale, and an instrument cleanly to use and easily freed from foreign substances after use.

The range of the scale is limited to the range of temperature in Fermenting Tanks. The tube is provided with an expansion chamber at the top to avoid breakage should the Thermometer be exposed to temperatures higher than its scale graduation. The scale-case is of aluminum and the stem of non-conducting hard rubber tubing.

The success of this radical departure in the method of taking temperature in Fermenting Tanks is attested by the hundreds now in use and their rapidly increasing sale.

NOTE.—The flexible nature of hard rubber tubing renders it unsuited for stems longer than 14 inches, and for ale vats requiring Thermometers with stems 24 inches long we use $\frac{3}{4}$ inch seamless copper tubing.

EACH.

- | | |
|--|-------|
| No. 408. Fig. A-6—7 inch Scale-case, 14 inch Hard Rubber Stem, Range 20° to 60° F. and R., for Lager Beer . . . \$ | 18 00 |
| No. 409. Fig. A-7—7 inch Scale-case, 24 inch Copper Stem, Range 30° to 90° F., for Ale, . . . | 22 50 |

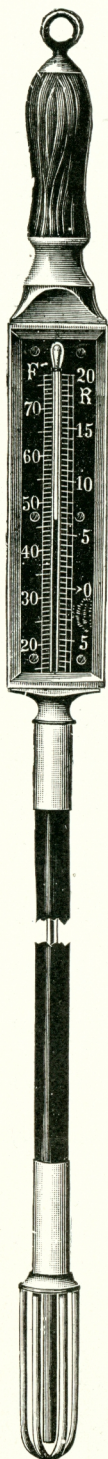


FIG. A-6

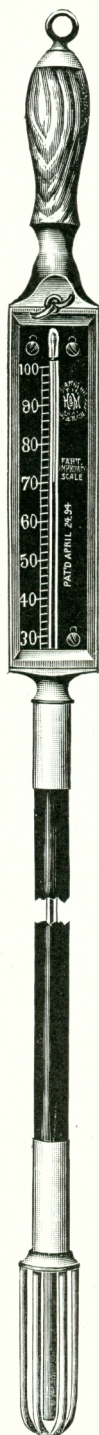


FIG. A-7.

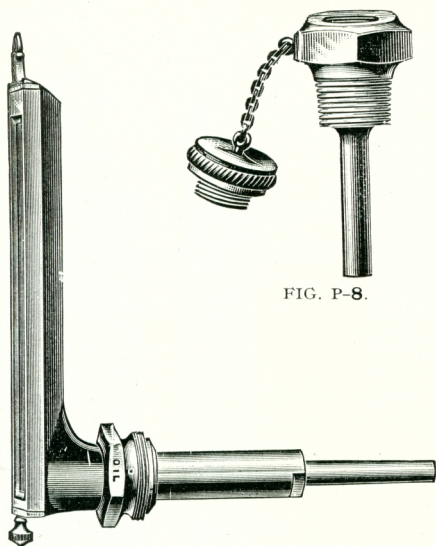


FIG. P-8.

FIG. A-9. Side View.

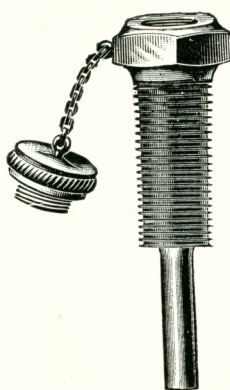
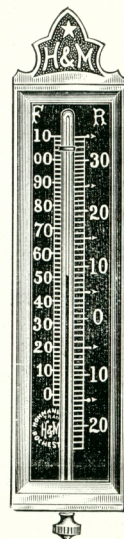


FIG. P-30.

FIG. A-9.
Front View.

Angle Stem Fermenting Tub Thermometers.

Our separable socket angle stem Fermentation Tub Thermometers, illustrated above in Figs. A-9 and P-30, and in B-16 and P-8, page 9, are by reason of their perfect fittings and connections the acknowledged bacteria-proof angle instruments; they are used exclusively on the Fermentation gas collecting apparatus manufactured by the *Joseph Schnieble Co.*, and also upon the *Pfautler Vacuum Fermentation Casks*, and are equally well adapted for use both upon wood and steel enameled casks. The sockets (P-30 for wood and P-8 for steel) remain permanently attached to the apparatus, while the Thermometer may be removed at will, as described on page 6.

FOR WOOD TUBS.

	EACH
No. 450. Figs. A-9 and P-30—7 inch Scale-case, Separable Socket, Scale 0 to 120° F. and R.	\$ 22 50
No. 451. Figs. B-16 and P-30—9 inch Scale case, Separable Socket, Scale 0 to 120° F. and R.	26 25
No. 460. Figs. B-12 and P-7½—9 inch Scale-case, Union Connection, Scale 0 to 120° F. and R.	22 50

FOR STEEL TUBS.

No. 458. Figs. B-16 and P-8—9 inch Scale-case, Separable Socket, Scale 0 to 120° F. and R.	26 25
No. 459. Figs. B-16 and P-7—9 inch Scale-case, Union Connection, Scale 0 to 120° F. and R.	22 50

PFAUDLER VACUUM FERMENTATION CO., }
ROCHESTER, Nov 16, '99 }

We have used Thermometers of your manufacture exclusively on our glass enameled steel tanks for several years past, and have yet to receive the first complaint regarding their accuracy and durability.

(Signed) E. G. MINER, Vice-President

THE JOSEPH SCHNIEBLE CO., }
NEW YORK, Nov. 10th. '99 }

The special Thermometers manufactured for us by your Company for several years have given our customers, and therefore ourselves, complete satisfaction. No record in our office indicates that any of our customers have ever been anything but pleased with instruments made by you.

(Signed) J. SCHNIEBLE, Pres't.

Pitching Machine Thermometer.

As to our Pitching Thermometers, their accuracy and adaptability to the purpose we will leave it to our friends, and quote :

"We have supplied large numbers of your Thermometers to users of our Pitching Machines during the past three years, and cheerfully testify to the high standard of excellence maintained in your product.

"PAWLING & HARNISCHFEGER.

"We have used your instruments in connection with our Pitching Machines for a period of over seven years, and they have given *better* satisfaction than any other we have ever tried.

"ZUNNER BROS."

"To do good pitching a reliable Thermometer is as necessary as a good pitching machine and good pitch. We have used your pitch Thermometers with our machines for a number of years, and they have given entire satisfaction.

"EUREKA MACHINE CO."

"We are happy to say that the Pitching Thermometer you have sent us for trial is giving complete satisfaction. Please *send us three more* of the same kind.

"Yours truly,

"PABST BREWING CO.,

"By G. G. PABST, *Vice-Prest.*"

- | | | |
|----------|---|----------|
| No. 411 | Figs. D-11 and P-24 -12 inch Scale-case, 12 inch stem, for "Eureka" Machine | \$ 18 00 |
| No. 412. | Fig. D-19-12 inch Scale-case, 18 inch stem, for Zunner | 24 00 |
| No. 413. | Fig. D-19-12 inch Scale-case, 21 inch stem, for P. & H. Machine | 30 00 |

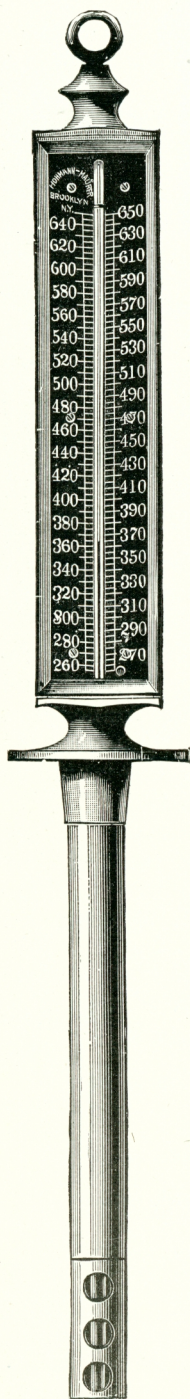


FIG. D-19.

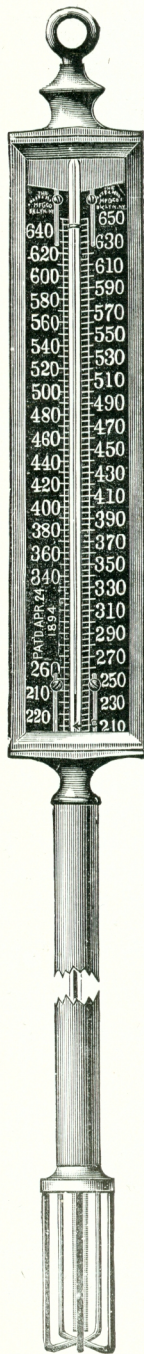


FIG. D-11.

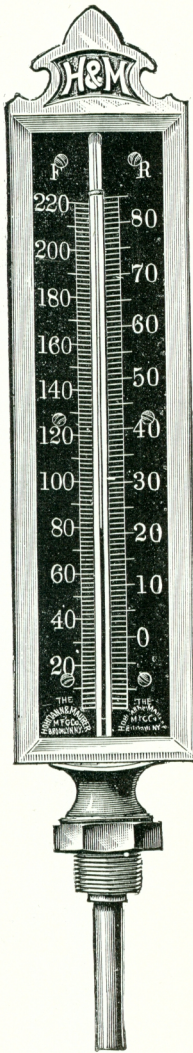


FIG. B-20.

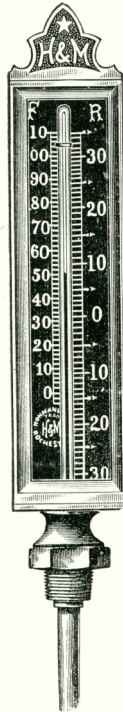


FIG. A-10

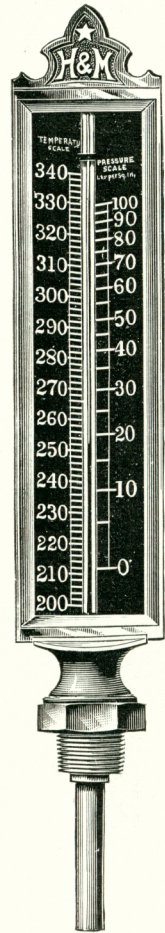


FIG. B-5.

Straight Stem Thermometers.

(For detail of measurements, see page 7.)

	EACH.
No. 414. Fig. B-20—9-inch scale case, $\frac{3}{4}$ -inch thread connection, for mash pipe, scale 60° to 220° F. and R.	\$ 15 00
No. 415. Fig. A-10—7-inch scale case, $\frac{3}{4}$ -inch thread connection, for mash pipe, scale 60° to 220° F. and R.	13 00
No. 416. Fig. A-10—7-inch scale case, $\frac{3}{4}$ -inch thread connection, for Rach's mash pipe, scale 60° to 300°	13 00
No. 417. Fig. B-5—9-inch scale case, $\frac{3}{4}$ -inch thread connection, for steam pipes, scale 200° to 350° F., 100 lbs. pressure	15 00
No. 418. Fig. A-1—7 inch scale case, $\frac{3}{4}$ -inch thread connection, special fitting for Hop Purifier, scale 190° to 300° F.	15 00
No. 318. 7-inch scale case, $\frac{1}{2}$ -inch thread connection, for beer coolers, scale 0° to 70° F. and R.	11 25
No. 315. 7-inch scale case, $\frac{1}{2}$ -inch thread connection, insulated, Brine Pipe or Pump Thermometer	13 50

Thermometers for Ice manufacture and Refrigeration are listed in separate catalogue. Write for Part 3.

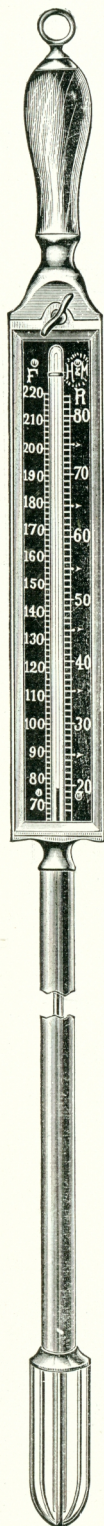


FIG. C-10.

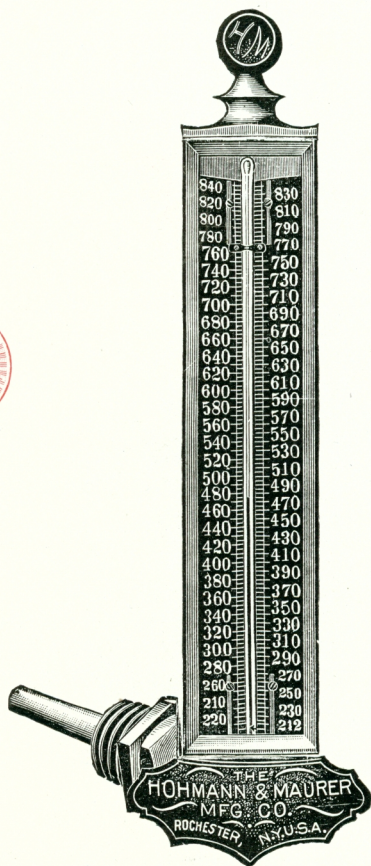


FIG. D-3 1/2.

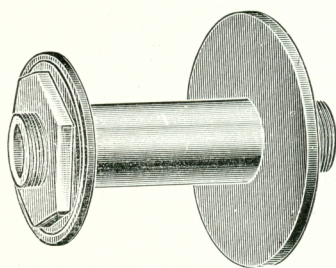


FIG. P-19.

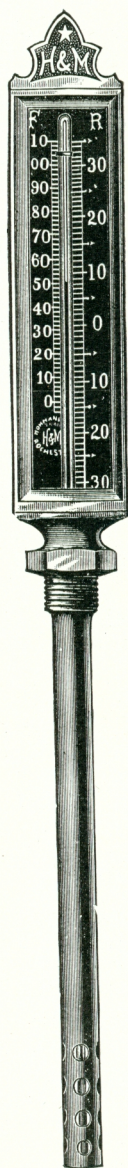


FIG. A-11.

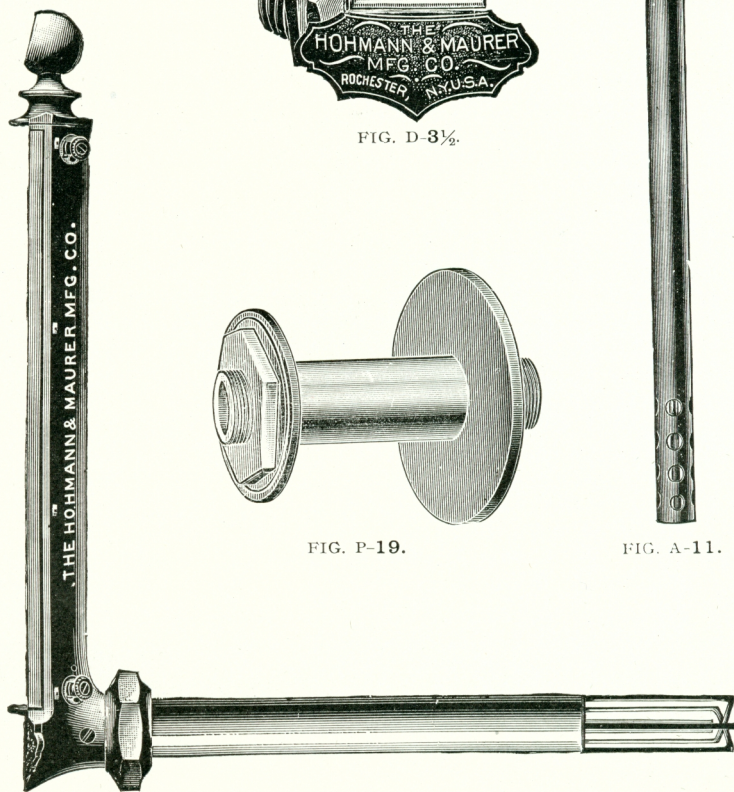


FIG. D-7.

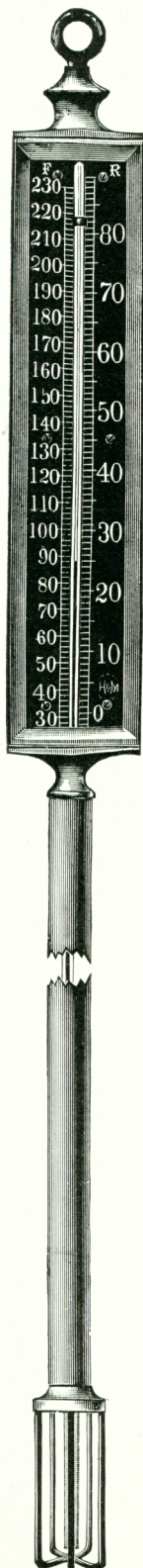


FIG. D-20.



Malting Thermometers.

FOR FLOOR OR PNEUMATIC MALTING.

		EACH.
No. 419.	Figs. D-20 and P-24½—12 inch scale case, 3 ft. stem, scale 0 to 150° F. and R.	\$ 25 50
No. 420.	Fig. C-10—10 inch scale case, with handle, 14 inch stem, scale 0 to 150° F. and R.	18 00
No. 421.	Fig. C-10—10 inch scale case, with handle, 24 inch stem, scale 0 to 150° F. and R.	22 50

FOR MALT KILNS—STRAIGHT STEMS.

No. 422.	Figs. D-20 and P-24½—12 inch scale case, 3 ft. stem, scale 100° to 250° F. and R.	25 50
No. 423.	Fig. C-10—10 inch scale case, with handle, 14 inch stem, for hand testing in malt kiln, scale 100° to 180° F. and R.	18 00
No. 424.	Fig. C-10—10 inch scale case, with handle, 24 inch stem, for hand testing in malt kiln	22 50

ANGLE STEMS.

No. 461.	Figs. D-7 and P-19—12 inch scale case, 24 inch angle stem, scale 60° to 230° F. and R.	30 00
No. 474.	Figs. D-3½ and P-19—12 inch scale case, 36 inch angle stem, scale 200° to 750°	36 00

Malting Drum Thermometers.

		EACH.
No. 425.	Fig. A-11—7 inch scale case, ¾ inch thread connection, 9 inch stem, perforated guard, scale 0 to 120° F. and R.	\$12 00
No. 426.	(Similar to Fig. A-11) 9 inch scale case, ¾ inch thread connection, 9 inch stem, perforated guard, scale 0 to 120° F. and R.	15 00

Sprinkling Pipe Thermometers.

		EACH.
No. 427.	Fig. A-10—7 inch scale case, ¾ inch thread connection, scale 0 to 100° F.	\$13 00
No. 428.	B-20—9 inch scale case, ¾ inch thread connection, scale 0 to 100° F.	15 00
No. 429.	Fig. P-21—12 inch scale case, 1 inch thread connection, scale 0 to 100° F.	21 00

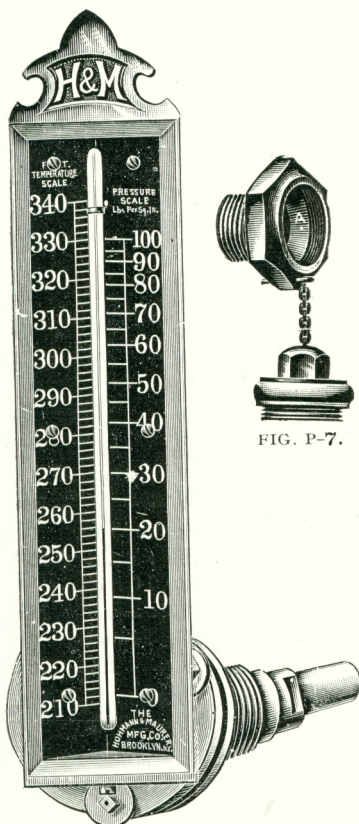


FIG. B-21.

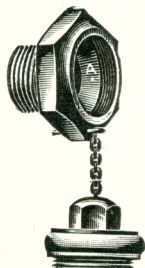


FIG. P-7.

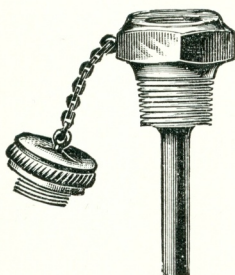
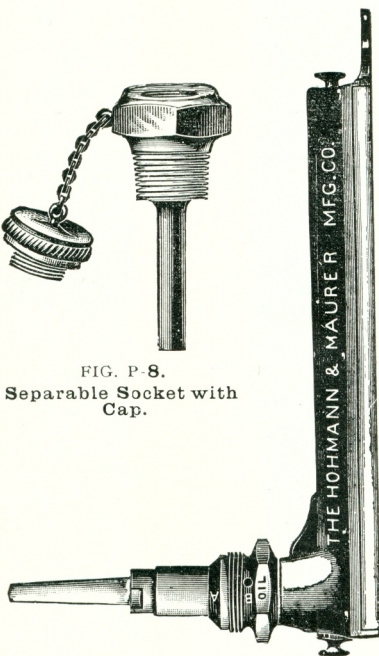
FIG. P-8.
Separable Socket with
Cap.

FIG. B-16.

Distilling Thermometers.

		EACH.
No. 475.	Figs. B-21 and P-7 (Union Connection)—9 inch scale case, angle stem Cooker Thermometer, scale 210° to 340°. 100 lbs. pressure	\$ 22 50
No. 476.	Figs. B-16 and P-8 (Separable Socket)—9 inch scale case, angle stem Cooker Thermometer, scale 210° to 340°, 100 lbs. pressure	27 00
No. 477.	Figs. B-12 and P-7 (Union Connection)—9 inch scale case, Mash Tub Thermometer, with door, angle stem, scale 60° to 220°	27 00
No. 429.	Figs. D-20½ and P-24½—12 inch aluminum scale case, Mash Tub Thermometer, 5-foot stem, scale 60° to 220°	31 00

NOTE.—As many of the Thermometers and Hydrometers required in distilling are also employed in brewing, we refer to other pages of Catalogue for such instruments as are not listed under this heading.

Pitching Machine
Thermometer.

As to our Pitching Thermometers, their accuracy and adaptability to the purpose we will leave it to our friends, and quote :

" We have supplied large numbers of your Thermometers to users of our Pitching Machines during the past three years, and cheerfully testify to the high standard of excellence maintained in your product.

" PAWLING & HARNISCHFEGER.

" We have used your instruments in connection with our Pitching Machines for a period of over seven years, and they have given *better* satisfaction than any other we have ever tried.

" ZUNNER BROS."

" To do good pitching a reliable Thermometer is as necessary as a good pitching machine and good pitch. We have used your pitch Thermometers with our machines for a number of years, and they have given entire satisfaction.

" EUREKA MACHINE CO."

" We are happy to say that the Pitching Thermometer you have sent us for trial is giving complete satisfaction. Please *send us three more* of the same kind.

" Yours truly,

" PABST BREWING CO.,

" By G. G. PABST, *Vice-Prest.*"

- No. 411 Figs. D-11 and P-24 -12 inch Scale, case, 12 inch stem, for "Eureka" Machine \$ 18 00
- No. 412. Fig. D-19-12 inch Scale, case, 18 inch stem, for Zunner 24 00
- No. 413. Fig. D-19-12 inch Scale, case, 21 inch stem, for P. & H. Machine 30 00

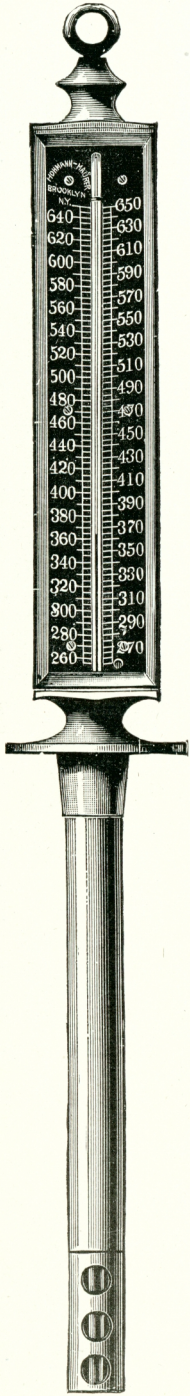


FIG. D-19.

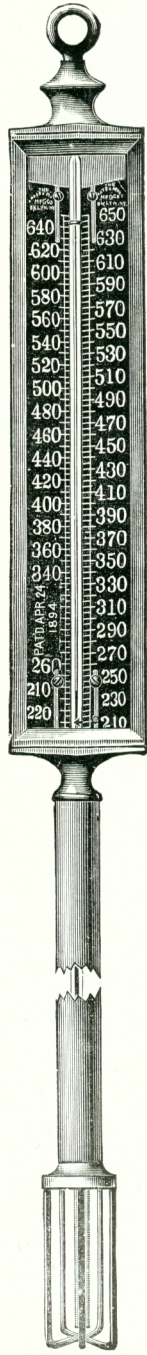
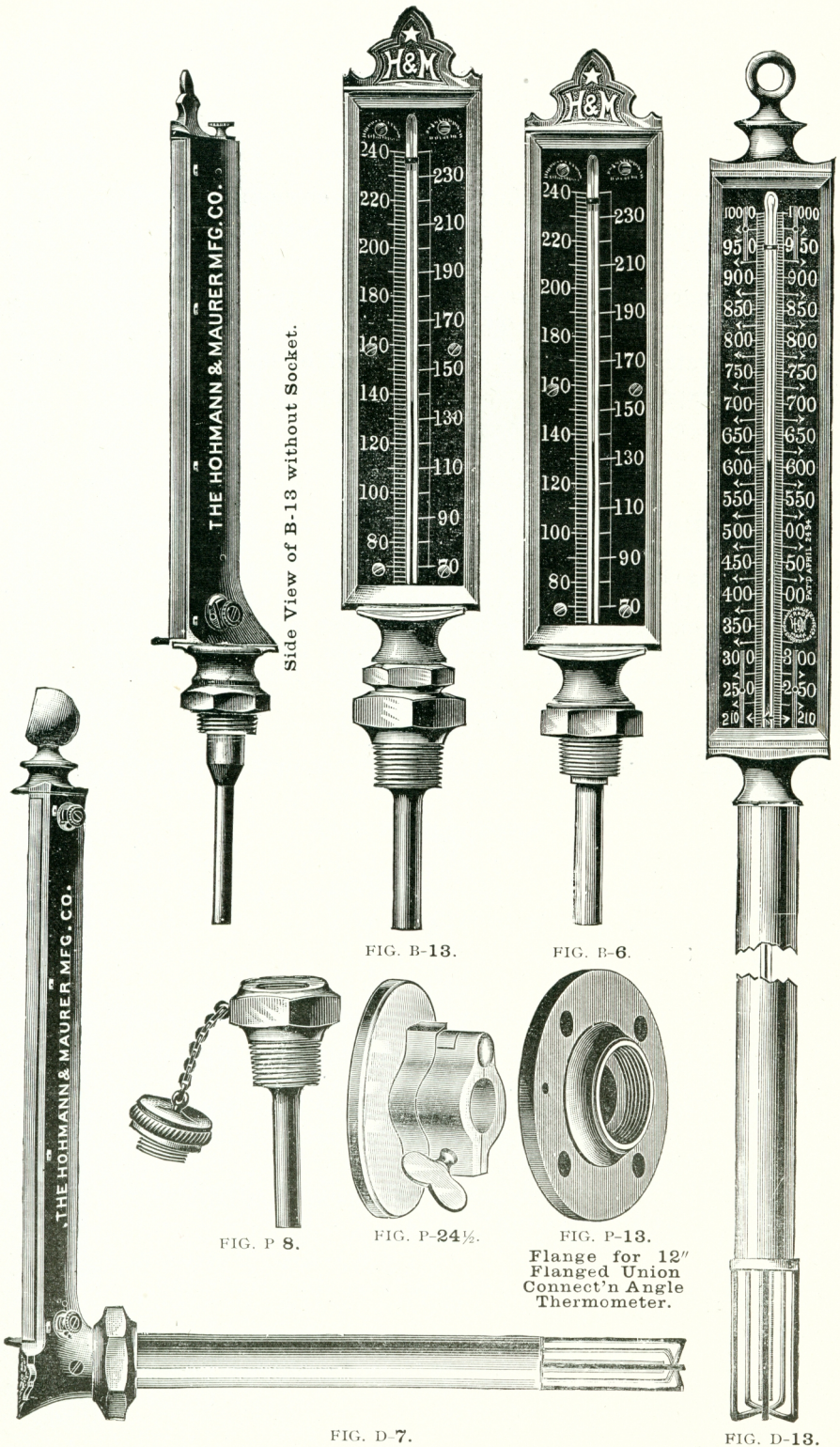


FIG. D-11.



Side View of B-13 without Socket.

FIG. B-13.

FIG. B-6.

FIG. P-8.

FIG. P-24 1/2.

FIG. P-13.

Flange for 12"
Flanged Union
Connect'n Angle
Thermometer.

FIG. D-7.

FIG. D-13.

Steam Plant Thermometers.

In every large manufacturing plant economy of fuel consumption is a factor in reducing costs not to be ignored. Two checks to fuel consumption of the utmost importance are the temperature of the feed water to the boiler and the temperature of the waste gases escaping from the stack. The thermometers listed below for flue gas and feed water temperatures are the result of many years of experience and experimental work, and are unquestionably the most perfect thermometers for these purposes.

Flue Gas Thermometers.

NOTE.—The stem construction of our flue gas thermometer is made somewhat similar to that of all our long stem instruments, as shown in cross section cut, Fig. P-32, page 12. The bulb and the stem of the thermometer tube is made of Jena boro-silicate, high resistance glass. The stem of the tube above the mercury column is filled with nitrogen gas under high pressure, which raises the boiling point of the mercury in the tube to 1000°, and up to that point the thermometer records very accurately. Our list of references from users of our Flue Gas Thermometers may interest you.

STRAIGHT STEM.

	EACH.
No. 28. Figs. D-13 and P-24 ½—12-inch scale case, 30-inch steel stem, scale 210° to 1000°	\$ 45 00

RIGHT ANGLE STEM.

No. 65. Figs. D-7 and P-13—12-inch scale case, 30-inch steel stem, 5-inch flanged Union Connection, scale 210° to 1000°	60 00
---	-------

Feed-Water Thermometers.

NOTE.—For description and advantages of separable socket, see page 6.

No. 15. Figs. B-13 and P-8—9-inch scale case, separable socket, scale 50° to 240°	22 50
No. 13. Figs. B-13 and P-8—9-inch scale case, separable socket, Economizer Thermometer, scale 50° to 240°	22 50
No. 7. Fig B-6—9-inch scale case, ¾-inch thread connection, scale 70° to 240°	15 00

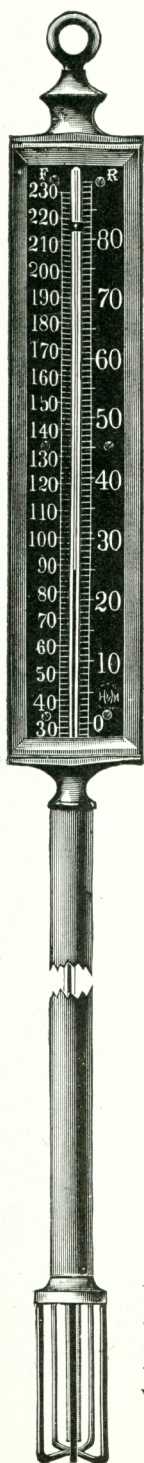


FIG. D 20.



FIG. 60.

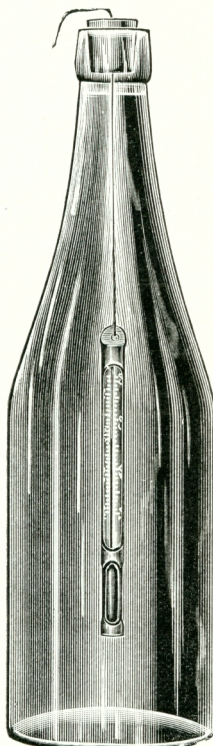


FIG. 61.



FIG. 62.

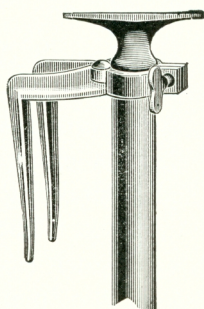


FIG. P-22.

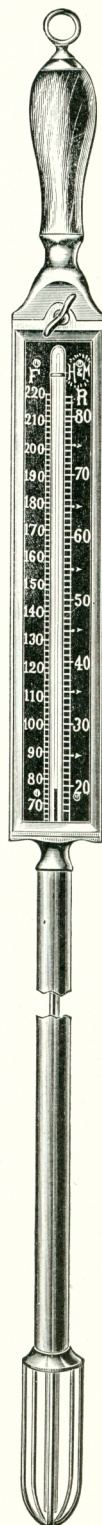


FIG. C-10

From American Brewing Co., Rochester, N. Y.

ROCHESTER, N. Y., Jan. 8, 1900.

Hohmann & Maurer Mfg. Co.:

GENTLEMEN: We have been using your Bottle-testing Thermometers for some time, and find them very valuable for our Bottling Department; also in testing the steaming tanks of our Agents and Bottlers we can readily locate the variation in temperature in any part of the tank.

Yours truly,

AMERICAN BREWING CO.
F. C. LOEBS, *Pres't.*

Beer Bottling and Sterilizing Thermometers.

The importance of sterilization in bottling beer for export is universally recognized, its success being dependent entirely upon the maintenance of a uniform temperature throughout the steaming tank in order that each bottle contained therein shall be subjected to the same degree of heat. The Thermometers herein listed for the purpose are the result of much experimenting, and have been adopted very largely by the bottling trade.

Steaming Tank Thermometers.

	EACH.
No. 430. Figs. D-20 and P-22—12-inch aluminum scale case, with two-foot stem, scale 60° to 220° F. and R.	\$ 24 00
No. 406. Fig. C-10—10 inch aluminum scale case, with handle, 14-inch stem, scale 60° to 220° F. and R.	18 00
No. 407. Fig. C-10—10-inch aluminum scale case, with handle, 24-inch stem, scale 30° to 220° F. and R.	22 50

Bottle Testing Thermometers

In order to determine whether all the bottles in the steaming tank have been subjected to the same maximum degree of temperature or not, the self-registering Thermometer illustrated in Figs. 60, 61 and 62 is employed. Two or more test bottles, preferably of clear glass, properly marked, containing thermometers, should be placed in different parts of the tank. The construction of the thermometer, as shown in Fig. 62, is such that the column, by means of a constriction in the calibre of the tube, shown by arrow, remains stationary at the highest point reached. After the reading has been obtained the mercury is driven back past this constriction by holding the thermometer in the hand at the top and shaking downwards. It is then ready for the next testing.

	PER DOZEN.
No. 1500. Fig. 60—4-inch armored self-registering bottle testing thermometer, scale 100° to 160° F. and R.	\$ 45 00

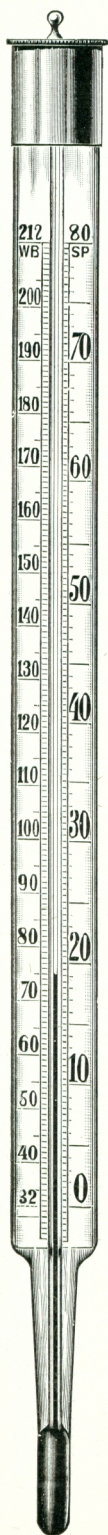


FIG. 65.

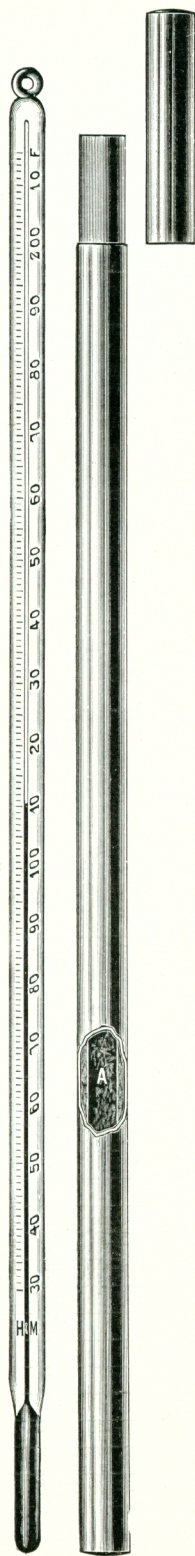


FIG. 66.

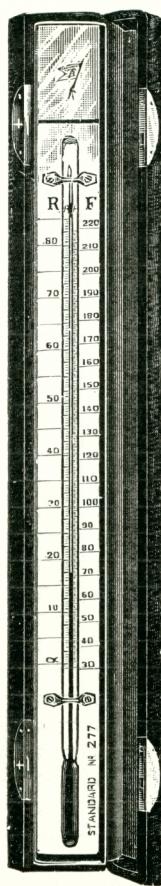


FIG. 28.

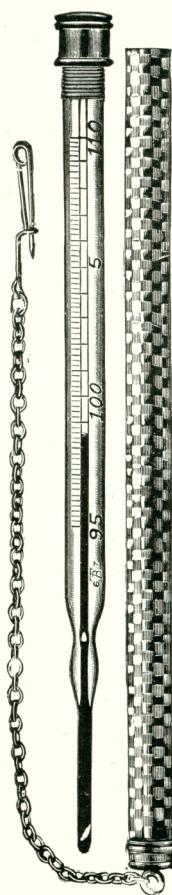


FIG. 67.

Thermometers of Precision.

These instruments are made with extreme precision for the purpose of making delicate tests, and for making comparisons with the less sensitive ordinary Thermometers used in brewing.

- No. 3072—Fig. 28—14 inch Certified Thermometer, scale 32° to 220° F., graduated on tube both F. and R. in $\frac{1}{5}^{\circ}$, with figures and every fifth degree line of scales marked on plate EACH.
\$15 00
- No. 3073. Fig. 28—Set of two 12 inch Certified Thermometers, graduated F. and R. scale, one from -10 to $+40$ R., the other from $+30$ to 80 R. Both F. and R. scales are graduated on the tube in $\frac{1}{5}^{\circ}$, with figures and every fifth degree line of the scales marked on plate. In morocco case Per Set.
\$24 00
- No. 3074. Fig. 65—14 inch cylindrical milk glass scale, normal standard Brewers' Test Thermometer, graduated in single degrees Fahrenheit, and in $\frac{1}{2}^{\circ}$ degree Reaumur, from 32° to 212° Fahrenheit. Each Thermometer accompanied with a certificate of corrections Each.
\$ 7 50

Pocket Testing Thermometers.

ORDINARY GRADE.

- No. 3075—5 inch pocket testing Thermometers, with glass scale in either hard rubber or nickel case, F. and R. to 220° F. Each.
\$ 1 50
- No. 3076. Fig. 67—5 inch pocket testing Thermometers, scale etched on stem, in gilt case, with chain and pin 2 25

The Standard Thermometers listed in the following table we make of any desired range of scale.

Graduation and Figures Etched on Tube.

PACKED IN FELT-LINED BRASS CASES.

Fig. 66 "A" shows Felt Lining.

FAHRENHEIT. CENTIGRADE OR REAUMUR.					TWO SCALES.		
No.	Length.	Range of Scale. Fahrenheit.	Grad- uated into	Price Each.	Range of Scale. F. & R. or R. & C.	Grad- uated into	Price Each.
3070	12 in.	$+30$ to 120°	$\frac{1}{2}^{\circ}$	\$ 9 00	$+30$ to 120° F.	$\frac{1}{2}^{\circ}$	\$13 50
	12 in.	$+30$ to 120°	1°	\$ 8 00	$+30$ to 120° F.	1°	\$12 00
	12 in.	0 to 120°	$\frac{1}{2}^{\circ}$	\$ 9 00	0 to 120° F.	$\frac{1}{2}^{\circ}$	\$15 00
	12 in.	0 to 120°	1°	\$ 8 00	0 to 120° F.	1°	\$12 00
	12 in.	$+30$ to 212°	$\frac{1}{2}^{\circ}$	\$10 00	$+30$ to 212° F.	$\frac{1}{2}^{\circ}$	\$13 50
	12 in.	$+30$ to 212°	1°	\$ 9 00	$+30$ to 212° F.	1°	\$13 50
3071	12 in.	0 to 212°	1°	\$ 9 00	0 to 212° F.	1°	\$13 50
	15 in.	$+30$ to 120°	$\frac{1}{4}^{\circ}$	\$ 6 50	$+30$ to 120° F.	$\frac{1}{4}^{\circ}$	\$18 00
	15 in.	$+30$ to 120°	$\frac{1}{2}^{\circ}$	\$10 00	$+30$ to 120° F.	$\frac{1}{2}^{\circ}$	\$15 00
	15 in.	0 to 120°	$\frac{1}{4}^{\circ}$	\$12 00	0 to 120° F.	$\frac{1}{4}^{\circ}$	\$18 00
	15 in.	0 to 120°	$\frac{1}{2}^{\circ}$	\$10 00	0 to 120° F.	$\frac{1}{2}^{\circ}$	\$15 00
	15 in.	$+30$ to 212°	$\frac{1}{2}^{\circ}$	\$11 00	$+30$ to 212° F.	$\frac{1}{2}^{\circ}$	\$16 50
	15 in.	$+30$ to 212°	1°	\$10 00	$+30$ to 212° F.	1°	\$15 00
	15 in.	0 to 212°	$\frac{1}{2}^{\circ}$	\$11 00	0 to 212° F.	$\frac{1}{2}^{\circ}$	\$18 00
	15 in.	0 to 212°	1°	\$10 00	0 to 212° F.	1°	\$15 00
	15 in.	0 to 212°	1°	\$10 00	0 to 212° F.	1°	\$15 00

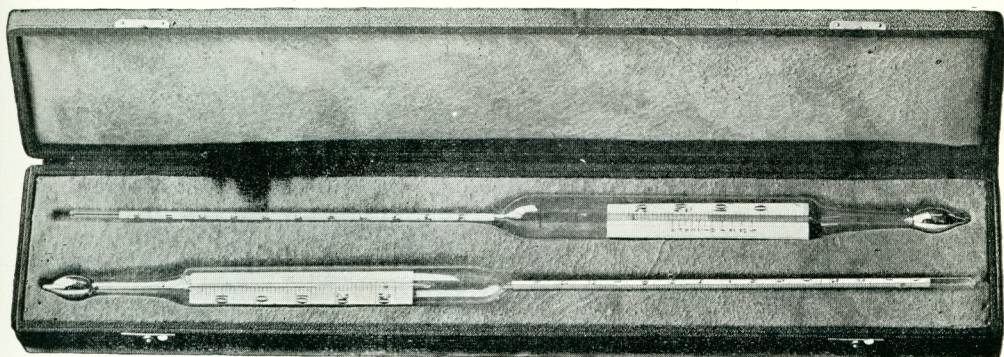


FIG. 64.

Sacchrometers.

No. 2004—Balling's Normal Standard Sacchrometer, combined with Standard Thermometer, scale 0 — 14°, divided in $\frac{1}{10}^{\circ}$, in wood case	EACH.	\$ 6 00
No. 2005—Balling's Normal Standard Sacchrometer, combined with Standard Thermometer, scale 10° to 20°, divided in $\frac{1}{10}^{\circ}$, in wood case	6 00 PER SET.	\$15 00
Nos. 2004 and 2005, in morocco case (Fig. 64) . .	EACH.	\$7 50
No. 2006—Balling's Normal Standard Sacchrometer, combined with Standard Thermometer, scale 0 — to 20°, divided in $\frac{1}{10}^{\circ}$		7 50
No. 2007—Kappeller's Normal Standard Sacchrometer		1 00
No. 2008—Kaiser Glass Sacchrometer, ordinary		1 75
No. 2009—Kaiser Glass Sacchrometer, ordinary, combined with Thermometer, length about 14 inches . .		1 50
No. 2010—Balling's Glass Pocket Sacchrometer, combined with Thermometer and test jar 6 inches long		1 00
No. 2011 —Balling's Glass Sacchrometer, ordinary . .	EACH.	\$1 75
No. 2012—Balling's Glass Sacchrometer, ordinary, combined with Thermometer		2 50
No. 2013—Balling's Glass Sacchrometer, ordinary, combined with Thermometer, temperature 80° Reaumur		9 00
No. 2014. Fig. 24—Silver Sacchrometer (Kaiser)		7 50
No. 2015. Fig. 24—Copper Sacchrometer (Kaiser)		9 00
No. 2016. Fig. 24—Silver Sacchrometer (Balling)		7 50
No. 2017. Fig. 24—Copper Sacchrometer (Balling)		6 00
No. 2018. Fig. 19—Copper can with Thermometer, for use with Sacchrometer		

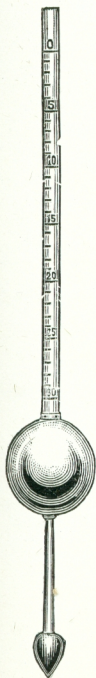


FIG. 24.

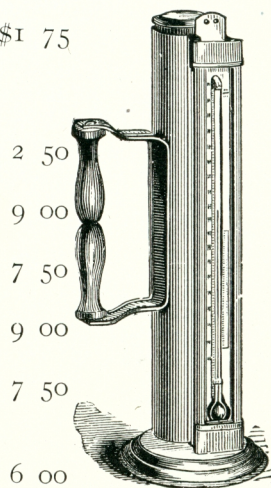


FIG. 19.

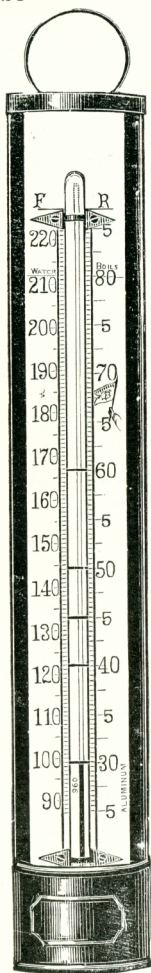


FIG. 26.

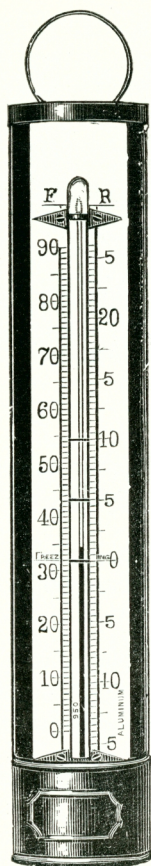


FIG. 25.

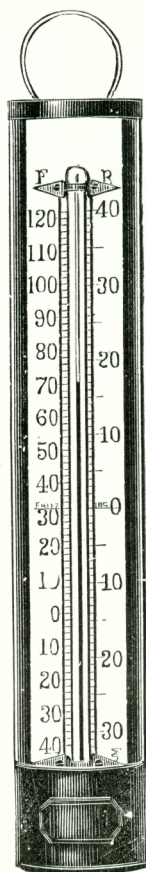


FIG. 27.

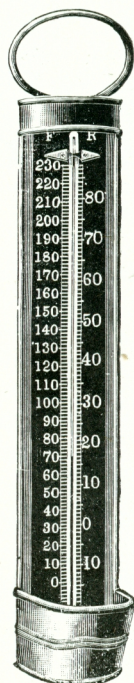


FIG. 32.

Certified Tin and Copper Case Thermometers.

	PER DOZ.
No. 1501. Fig. 26—12-inch Tin Case Mash Thermometer, certified at 30°, 40°, 50°, 60° Réaumur	\$ 33 00
No. 1502. Fig. 26—14 inch Tin Case Mash Thermometer, certified at 30°, 40°, 50°, 60° Réaumur	36 00
No. 1503. Fig. 25—12-inch Tin Case Cellar Thermometer, certified at 0°, 5°, 10° Réaumur	30 00
No. 1504. Fig. 27—12 inch Tin Case Thermometer for taking air temperatures, extra grade	21 00
No. 1505. Fig. 32—12 inch, extra heavy, Copper Cup Case Mash Thermometer, certified at 30°, 40°, 50°, 60° Réaumur	45 00
No. 1506. Fig. 32—14 inch, extra heavy, Copper Cup Case Mash Thermometer, certified at 30°, 40°, 50°, 60° Réaumur	51 00

ORDINARY TIN CASE THERMOMETERS.

No. 1507—10-inch Tin Case Thermometer, similar in pattern to Fig. 26	13 50
No. 1508—12-inch Tin Case Thermometer, similar in pattern to Fig. 26	15 75
No. 1509—14 inch Tin Case Thermometer, similar in pattern to Fig. 26	21 00
No. 1510—12-inch Tin Case Thermometer, graduated from 0 to 120° F., for cellar use, similar in pattern to Fig. 27	15 75
No. 1511—12-inch Tin Case Thermometer, graduated from 30° to 70° F. for cellar use, with expansion chamber	21 00
No. 1512. Fig. 31—12 inch heavy Galvanized Iron Frame Thermometer, for cellar use or refrigerating plants, graduated 0 to 90° F., with expansion chamber or as specified	27 00



FIG. 29½.

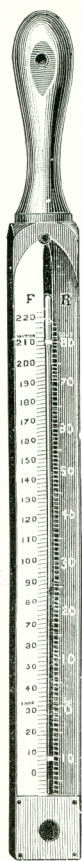


FIG. 29.

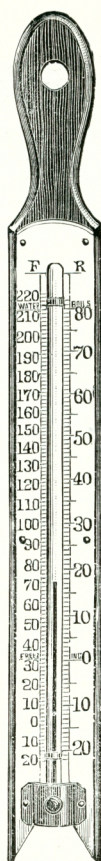


FIG. 33.

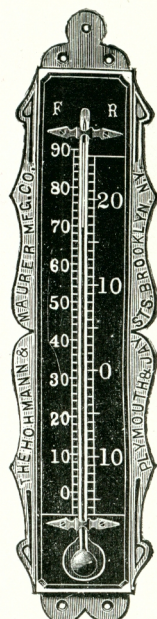


FIG. 31.

Ordinary Copper Case Thermometers.

	PER DOZEN.
No. 1513—10 inch Copper Case Thermometer, similar in pattern to Fig. 26	\$21 00
No. 1514—12 inch Copper Case Thermometer, similar in pattern to Fig. 26	22 50
No. 1515—10 inch Copper Cup Case Thermometer, similar in pattern to Fig. 32	22 50
No. 1516—12 inch Copper Cup Case Thermometer, similar in pattern to Fig. 32	27 00
No. 1517—14 inch Copper Cup Case Thermometer, similar in pattern to Fig. 32	33 75

Ordinary Wood Cased Thermometers.

	PER DOZEN.
No. 1518. Fig. 29½—10 inch V grooved oak case Thermometer	\$ 16 00
No. 1519. Fig. 29½—12 inch V grooved oak case Thermometer	18 00
No. 1520. Fig. 29—14 inch V grooved oak case with handle	22 50
No. 1521—12 inch oak "strop" case Thermometer	16 00
No. 1522—14 inch oak "strop" case Thermometer	21 00
No. 1523 Fig. 33—12 inch oak "strop" case Thermometer, open bottom, tube sunk	22 50
No. 1524—12 inch all brass "bow" frame Thermometer	45 00
No. 1525—14 inch all brass "bow" frame Thermometer	54 00
No. 1526—36 inch wood frame Thermometer, for mash	EACH. 8 00
No. 1527—48 inch wood frame Thermometer, for mash	10 50

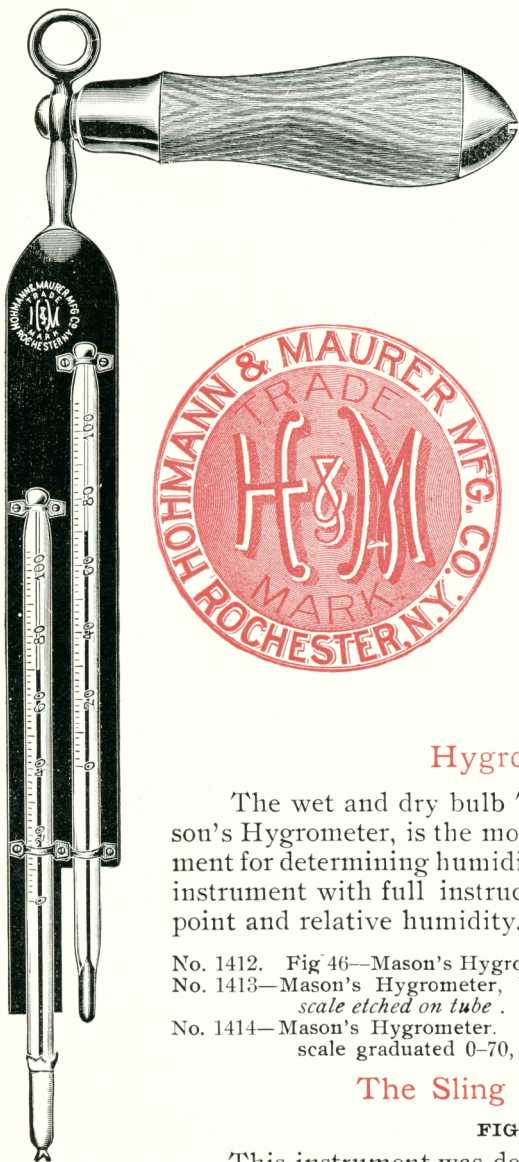


FIG. 59.

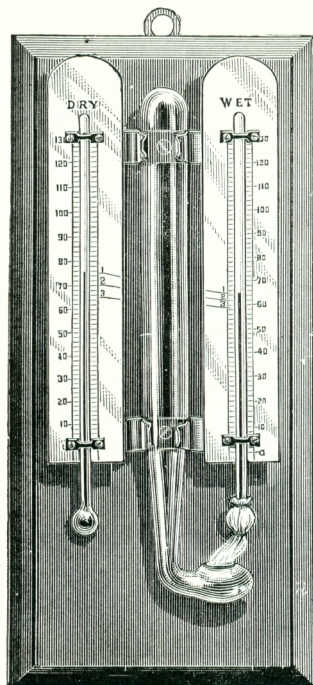


FIG. 46.

Hygrometers.

The wet and dry bulb Thermometer, known as Mason's Hygrometer, is the most satisfactory form of instrument for determining humidity. Tables accompany each instrument with full instructions how to determine dew point and relative humidity.

	EACH.
No. 1412. Fig 46—Mason's Hygrometer	\$ 4 50
No. 1413—Mason's Hygrometer, Weather Bureau Pattern, scale etched on tube	9 00
No. 1414—Mason's Hygrometer. Same style as No. 1413; scale graduated 0-70, in one-half degrees	12 00

The Sling Hygrometer.

FIG. 59.

This instrument was designed for the purpose of obtaining quick and more accurate results than are possible with the stationary wet and dry bulb instrument. We have improved upon the original design by doing away with the link connection between the thermometer back and the handle. Our improved form lessens the liability to breakage in swinging, and enables the user to more quickly obtain the readings than is possible on the less rigid, link handle form.

	EACH.
No. 1409—Sling Hygrometer, scale 0-100° graduated in 2° spaces	\$ 7 50
No. 1410—Sling Hygrometer, scale 0-100° graduated in 1° spaces	7 50
No. 1411—Sling Hygrometer, scale +10 to +70° graduated in $\frac{1}{2}$ ° spaces	10 00

Self-Registering Thermometers.

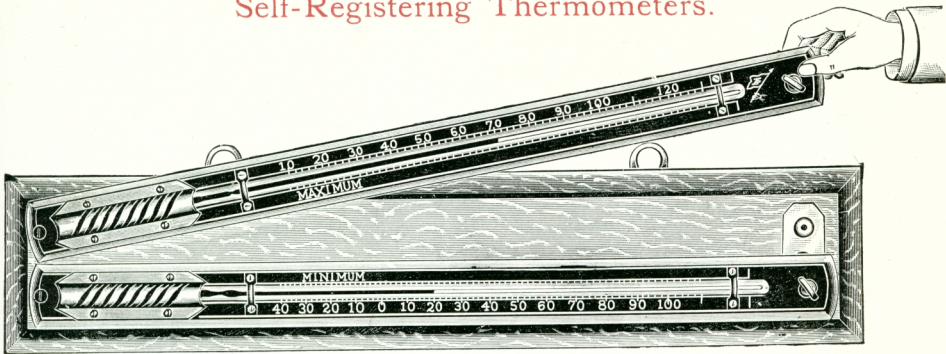


FIG. 45.

Six's Thermometer, Fig. 47, registering extremes of heat and cold, consists of a long tubular bulb, united to a smaller tube more than twice its length, and bent twice, like a syphon, so that the larger tube is in the centre, while the smaller one terminates at the top, on the right hand, in a pear-shaped bulb, as shown in the cut. This bulb, and the tube in connection with it, is partly filled with spirit ; the long, central tube, and its connecting tube, are completely filled, while the lower portion of the syphon is filled with mercury. A steel index, prevented from falling by a hair tied around it, to act as a spring, moves in the spirit in each of the side tubes.

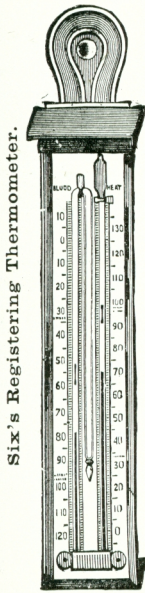


FIG. 47.

The scale on the left hand, for indicating minimum temperatures, is a descending one, the zero being at the top ; while the right hand scale for maximum temperatures is an ascending one, having the zero at the bottom.

When setting the instrument, the indices are brought into contact with the mercury by passing a small magnet down the outside of each tube. Then, should a rise of temperature take place, the spirit in the central bulb expands, forcing down the mercury in the left-hand tube, and causing it to rise in the right, which it does also partly by its own expansion. The reverse of this occurs when a diminution of temperature takes place ; contraction in all the contained fluids result, and the registering mercury ascends in the left-hand column, pushing the index before, where it remains until readjusted for the next observation.

FIG. 47.

EACH.

1401— 8 inch black japanned tin case Six's Registering Thermometer, silvered metal scale	\$ 3 50
1402—10 inch Six's Registering Thermometer, same as No. 1401	4 00
1403— 8 inch white japanned tin cased Six's Registering Thermometer, oxydized metal scale	3 75
1404—10 inch Six's Thermometer, same as 1403	4 25
1405— 8 inch copper cased Six's Registering Thermometer	4 00
1406—10 inch Six's Thermometer, same as No. 1405	4 75

FIG. 45.

1407—12 inch antique oak frame, Maximum and Minimum Registering Thermometer, each tube mounted on separate plate, attached at upper end with small thumb screw, so that Thermometers may be reset as indicated in cut ; full description accompanies each instrument	3 50
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Glass Angle Thermometers.

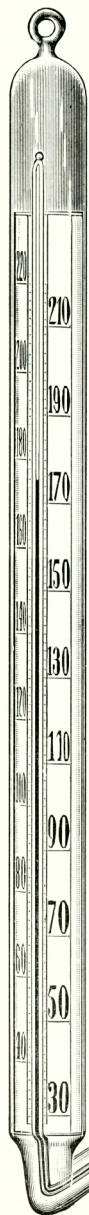


FIG. 68.

FIG. 68.

EACH.

No. 1527—All Glass Angle Thermometer, paper scale, 12 x 3	\$ 1 50
No. 1528—All Glass Angle Thermometer, paper scale, 12 x 4	1 75
No. 1529—All Glass Angle Thermometer, paper scale, 12 x 5	2 25

Sacchrometer Jars.

These Cylinders are of the best German glass. Dimensions given are approximate, actual measurements being in centimetres.

High.	Wide.	Capacity In Grammes.	Each.
11 ½ in. . 1 ½ in. .	150 .	\$0 75	
12 in. . 1 ½ in. .	200 .	0 90	
13 in. . 2 in. .	300 .	1 00	
14 in. . 2 in. .	500 .	1 20	
17 ½ in. . 2 ½ in. .	1,000 .	1 50	

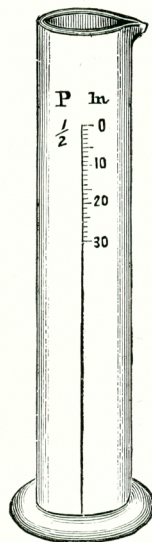


FIG. 22.

U. S. Internal Revenue Hydrometers.

No. 2019—Spirit Hydrometers, set of 5 stems according to standard adopted by Internal Revenue Department	Per Set \$ 12 00
No. 2020—Spirit Hydrometers, set of 5 stems and Hydrometer can in walnut case	27 00
No. 2021—Spirit Hydrometer, stem No. 1, 0 to 100 according to Internal Revenue standard	Each. \$ 1 75
No. 2022—Spirit Hydrometer, stem No. 2, 80 to 120 (whiskey scale) according to Internal Revenue standard	1 75
No. 2023—Spirit Hydrometer, stem No. 3, 100 to 140 according to Internal Revenue standard	1 75
No. 2024—Spirit Hydrometer, stem No. 4, 130 to 170, according to Internal Revenue standard	1 75
No. 2025—Spirit Hydrometer, stem No. 5, 160 to 200, according to Internal Revenue standard	1 75

Laboratory Thermometers.

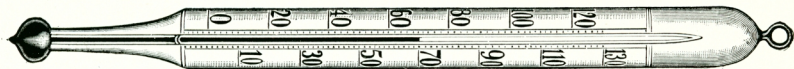


FIG. 23.

Insulated Glass Cylindrical Thermometers.

HAND WRITTEN PAPER SCALES.

PER DOZEN.

No. 3000—8 inch round bulb Thermometer, Fahrenheit scale to 220°	\$ 6 00
No. 3001—10 inch round bulb Thermometer, Fahrenheit scale to 260°	7 00
No. 3002—12 inch round bulb Thermometer, Fahrenheit scale to 280°	8 00
No. 3003—8 inch round bulb Thermometer, Fahrenheit and Centigrade Scale to 220° F	7 00
No. 3004—10 inch round bulb Thermometer, Fahrenheit and Centigrade scale to 260° F	8 00
No. 3005—12 inch round bulb Thermometer, Fahrenheit and Centigrade scale to 280° F	9 00

Solid Glass Thermometers.

WITH SCALES ETCHED ON STEMS—Fig 11.

No. 3050 —12" Thermometer, 220° Fahrenheit	13 50
No. 3051 —12" Thermometer, 300° Fahrenheit	15 00
No. 3052 —14" Thermometer, 400° Fahrenheit	18 00
No. 3053 —16" Thermometer, 600° Fahrenheit	21 00
No. 3050C—12" Thermometer, 100° Centigrade	13 50
No. 3051C—12" Thermometer, 150° Centigrade	15 00
No. 3052C—14" Thermometer, 200° Centigrade	18 00
No. 3053C—16" Thermometer, 300° Centigrade	21 00
No. 3050A—12" Thermometer, F. and C. to 212° F	17 00
No. 3051A—12" Thermometer, F. and C. to 300° F	18 00
No. 3052A—14" Thermometer, F. and C. to 400° F	21 00
No. 3053A—16" Thermometer, F. and C. to 600° F	25 00

SOLID GLASS THERMOMETERS—Calibrated and Certified.

Scales Etched on Stem.

PER DOZEN.

No. 3054 —12" Thermometer, 220° Fahrenheit	\$ 27 00
No. 3055 —12" Thermometer, 300° Fahrenheit	30 00
No. 3056 —14" Thermometer, 400° Fahrenheit	36 00
No. 3057 —16" Thermometer, 600° Fahrenheit	42 00
No. 3054C—12" Thermometer, 100° Centigrade	27 00
No. 3055C—12" Thermometer, 150° Centigrade	30 00
No. 3056C—14" Thermometer, 200° Centigrade	36 00
No. 3057C—16" Thermometer, 300° Centigrade	42 00

ARMOR CASES FOR SOLID GLASS THERMOMETERS.

FIG. 12.

PER DOZEN.

12" Thermometers, add to list price	\$ 27 00
14" Thermometers, add to list price	27 00
16" Thermometers, add to list price	27 00

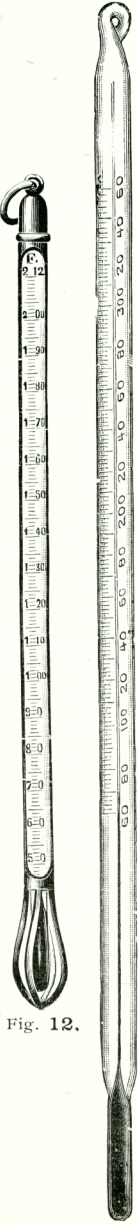


Fig. 12.

FIG. 11.

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