

1925
DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS
George K. Burgess, Director

**SUPPLEMENTARY LIST OF
PUBLICATIONS OF THE
BUREAU OF STANDARDS**

BEGINNING JULY 1, 1925

*Reference book not to be
taken from the Library.*

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George K. Burgess, Director

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OF THE BUREAU OF STANDARDS

(BEGINNING JULY 1, 1925)

(For papers prior to this date see Circular No. 24, edition of June 30, 1925)

September 12, 1925



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WASHINGTON
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1925

SUPPLEMENTARY LIST OF PUBLICATIONS OF THE BUREAU OF STANDARDS

Beginning July 1, 1925

(For papers prior to this date see Circular No. 24, edition of June 30, 1925)

This supplementary list is issued from time to time to keep current and to supplement the information given in Circular of the Bureau of Standards, No. 24: Publications of the Bureau of Standards. This supplement will bring up to date the information listed below under "Contents."

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I. DESIGNATIONS OF PUBLICATION SERIES

Eight series are issued: S, Scientific Papers; T, Technologic Papers; C, Circulars; H, Handbooks; R, Simplified Practice Recommendations; L, Limitation of Variety Recommendations; BH, Building and Housing; and M, Miscellaneous Publications. The separate papers in each series are numbered consecutively. An initial letter preceding each number shows the particular series; S for Scientific Papers, T for Technologic Papers, etc.—thus T203 is “Technologic Paper No. 203.” In referring to publications the series *initial* and the *number* are *both* needed to give complete identification. For information regarding the Technical News Bulletin see page 4.

II. ANNOUNCEMENT OF NEW PUBLICATIONS

A mailing list is maintained to which is sent at regular intervals a card giving titles and prices of new publications issued. Names will be added to this announcement list on request. Notice should be given promptly by those on this list of any change of address, giving the exact form of the old as well as the new address.

One of the objects of this supplement is to list new publications issued after the latest edition of Circular No. 24, Publications of the Bureau of Standards. Such new publications will be listed in the succeeding editions of this supplement until it becomes desirable to revise the complete list given in Circular No. 24.

III. PUBLICATIONS NOT AVAILABLE

The publications listed below are not available for distribution by the Bureau of Standards nor for sale by the Superintendent of Documents. They may be consulted at some of the designated depository libraries listed on pages 8 to 12.

Scientific Papers.—S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S16, S19, S20, S21, S22, S24, S25, S27, S28, S29, S30, S32, S33, S34, S35, S36, S37, S38, S39, S41, S42, S43, S44, S45, S46, S47, S49, S51, S52, S53, S55, S56, S57, S58, S60, S61, S62, S67, S68, S69, S70, S71, S72, S74, S75, S77, S79, S81, S82, S87, S89, S90, S92, S93, S94, S95, S96, S100, S101, S102, S103, S104, S105, S108, S112, S113, S114, S115, S118, S120, S121, S122, S123, S125, S126, S128, S129, S130, S133, S138, S139, S140, S142, S143, S146, S147, S149, S151, S154, S155, S157, S159, S162, S165, S166, S168, S172, S173, S174, S175, S178, S180, S181, S182, S186, S187, S188, S189, S190, S193, S194, S200, S202, S203, S210, S212, S213, S215, S216, S223, S224, S226, S230, S231, S232, S233, S239, S243, S249, S255, S256, S258, S263, S264, S265, S269, S274, S275, S277, S279, S284, S285, S288, S290, S291, S297, S304, S308, S317, S341.

Technologic Papers.—T2, T3, T4, T5, T7, T8, T11, T12, T13, T14, T17, T19, T21, T23, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T37, T39, T40, T44, T45, T46, T48, T50, T51, T52, T54, T57, T58, T60, T64, T65, T66, T68, T71, T73, T74, T78, T82, T87, T88, T89, T90, T94, T100, T103, T113, T122, T164, T177, T198.

Circulars.—C2, C4, C7, C8, C9, C11, C12, C14, C15, C21, C22, C23, C28, C29, C34, C36, C39, C45, C49, C50, C54, C57, C59.

Miscellaneous Publications.—M1, M4, M7, M9, M11, M16, M18, M20, M54.

IV. ORDERING

Any of the publications in Circular No. 24 and this supplementary list, with the exception of those listed under "Publications not available," may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the price indicated. Purchase orders with remittance should be sent to the Superintendent of Documents. (Do not send any such orders or remittances to the Bureau of Standards.)

Order by serial initial, letter, and number combined (for example, "Bureau of Standards publication T281"). If initial and number are correctly given, the title is not needed.

All publications are sent out by the Superintendent of Documents, as provided by law, and usually reach destination within a week or two.

For the convenience of the general public coupons (good until used in exchange for Government publications sold by the Superintendent of Documents) may be purchased from his office in sets of 20 for \$1.

TERMS AND MAILING.—(a) *Domestic.*—Remittance should be made by coupons, postal money order, express order, or New York draft payable to the "Superintendent of Documents, Government Printing Office, Washington, D. C." Currency may be sent at sender's risk. Postage stamps, defaced or smooth coins, or foreign money positively will not be accepted. Publications are forwarded under Government frank to addresses in the United States and its possessions; also to Mexico and Canada.

(b) *Foreign.*—With the exception of Mexico and Canada, include in your remittance, in addition to the price of the publication, about one-third of the price quoted to cover postage. Publications intended for Mexico and Canada will be sent under Government frank. If the amount remitted is in excess of the postage required, the balance will be refunded to you, and if additional postage is required you will be notified.

Kindly make remittance by international money order or New York draft, payable to the "Superintendent of Documents, Government Printing Office, Washington, D. C., U. S. A."

V. BOUND VOLUMES

In addition to the separate papers, both the Scientific and Technologic series are also issued in bound form of about 750 pages to each volume, consecutively paged, including title page and index. Subscription for either series may be placed in advance with the Superintendent of Documents to receive the separates as issued at \$1.25 per volume (unbound) and \$2 for each volume bound in cloth. See price list on page 4.

The Scientific Papers may be obtained in bound form from volume 1 to 19. (Previous to volume 15 they were called "Reprints" and in the bound form were known as the "Bulletin.") Plan (d) is especially recommended.

The Technologic Papers in the bound form begin with volume 16, Technologic Paper No. 203. Previous to this they had only been issued as separates. Plan (g) is especially recommended.

Price list and subscription basis

	Per volume
(a) Bulletins of the Bureau of Standards, vols. 1-14, inclusive; 1904-1914 (cloth)-----	\$2. 00
(b) Series (a) continued—Scientific Papers of the Bureau of Standards, vols. 15-19 (cloth)-----	2. 00
(c) Unbound separates, reprints of (b), sent as issued-----	1. 25
(d) Combination (c) and (b)-----	3. 25
(e) Technologic Papers of the Bureau of Standards, vols. 16-18 (cloth)---	2. 00
(f) Unbound separates of Technologic Papers sent as issued-----	1. 25
(g) Combination of (f) and (e)-----	3. 25

VI. TECHNICAL NEWS BULLETIN

The "Technical News Bulletin" is a monthly publication designed to keep the public informed of the progress of work in the Bureau of Standards. New publications of the bureau issued during the month are listed in this bulletin.

The subscription price is 25 cents per year. Mail your subscription with remittance to the Superintendent of Documents, Government Printing Office, Washington, D. C.

VII. DATA CONCERNING LATEST EDITIONS OF CIRCULARS

[Those Marked (*) Are Out of Print and no Longer Available]

Cir. No.	Edition	Date	No. of pages	Price	Cir. No.	Edition	Date	No. of pages	Price
1 ¹	2				60	2	Mar. 12, 1920	68	15
* 2	5	Apr. 30, 1915	21		61	2	Aug. 31, 1920	44	10
3	3	Dec. 23, 1913	89	15	62	3	Jan. 24, 1923	24	5
* 4	2	Jan. 3, 1905	2		63	1	May 17, 1917	8	5
5	3	July 16, 1917	19	5	64	1	Apr. 20, 1917	6	5
6	7	Dec. 30, 1916	30	5	65	1	July 23, 1917	19	5
* 7	5	Oct. 1, 1913	19		66	1	July 25, 1917	13	5
* 8	3	Aug. 11, 1921	18		67	1	Jan. 17, 1918	5	5
* 9	8	Mar. 31, 1916	32		68	1	Oct. 6, 1917	8	5
10	4	Jan. 22, 1924	18	5	69	1	Nov. 17, 1917	85	15
*11	3	June 23, 1917	18		70	1	Dec. 5, 1917	259	25
*12 ²	1	July 16, 1906	7		71	1	Sept. 18, 1917	8	5
13	10	Feb. 7, 1923	16	5	72	1	June 17, 1918	84	20
*14	5	Mar. 20, 1916	17		73	2	Nov. 14, 1922	108	20
*15	3	July 1, 1911	7		74	2	Mar. 10, 1924	345	60
16	5	July 13, 1922	16	5	75	1	Jan. 10, 1918	127	15
17	3	Mar. 18, 1916	50	15	76	1	Apr. 21, 1919	120	20
18	2	July 1, 1911	4	5	77	1	Mar. 10, 1919	67	10
19	6	Oct. 31, 1924	72	15	78	2	Mar. 20, 1923	14	5
20	2	May 28, 1915	57	15	79	2	Jan. 19, 1923	62	15
*21	1	Mar. 1, 1910	30		80	2	Sept. 2, 1922	34	20
*22	2	May 15, 1911	12		81	2	Dec. 21, 1922	32	10
*23	1	July 15, 1910	93		82	2	June 8, 1922	9	5
24	7				83	1	Jan. 31, 1920	35	5
25	8	June 26, 1923	14	5	84	2	July 3, 1922	8	5
26	4	Apr. 5, 1921	20	5	85	2	do	9	5
27	2	Aug. 9, 1918	41	10	86	2	Oct. 6, 1922	11	5
*28	1	Mar. 1, 1911	19		87	2	July 3, 1922	8	5
*29	1	Dec. 31, 1910	13		88	2	do	8	5
30	2	July 6, 1920	25	5	89	2	July 3, 1922	10	5
31	3	Oct. 1, 1914	76	20	90	2	May 23, 1922	8	5
32	4	Dec. 7, 1920	140	20	91	2	June 21, 1922	8	5
33	3	Jan. 18, 1917	43	10	92	1	June 7, 1920	94	30
*34	3	May 15, 1915	16		93	2	June 21, 1922	9	5
35	4	Dec. 1, 1919	2	5	94	2	July 7, 1922	8	5
*36	1	June 30, 1912	26		95	2	Mar. 5, 1925	32	10
37	2	Jan. 1, 1915	13	5	96	1	June 15, 1920	5	5
38	4	Sept. 28, 1921	127	20	97	3	July 3, 1922	10	5
*39	1	Dec. 16, 1912	14		98	2	Feb. 28, 1923	10	5
40	3	Sept. 10, 1920	13	5	99	1	Nov. 12, 1920	44	10
41	3	Sept. 20, 1918	15	5	100	2	May 9, 1924	162	40
42	2	Aug. 29, 1921	11	5	101	2	Apr. 23, 1924	204	40
43	2	Jan. 24, 1921	46	10	102	2	Sept. 22, 1922	5	5
44	2	Jan. 30, 1918	196	25	103	3	July 22, 1922	6	5
*45	1	Nov. 1, 1913	89		104	2	Jan. 30, 1923	7	5
46	3	Dec. 26, 1922	22	10	105	2	Sept. 18, 1922	4	5
47	1	July 1, 1914	68	15	106	1	Nov. 24, 1920	15	5
47 (supt.) ³	1	Oct. 27, 1917	10	5	107	1	Feb. 12, 1921	37	10
48	2	June 10, 1916	202	40	108	1	Jan. 3, 1921	21	5
*49	2	May 4, 1915	50		109	1	do	9	5
*50	2	June 8, 1917	34		110	1	Feb. 26, 1921	8	5
51	1	Dec. 1, 1914	39	15	111	2	June 24, 1922	8	5
52	2	June 28, 1916	44	10	112	1	June 24, 1921	214	65
53	1	Mar. 29, 1915	35	10	113	2	July 7, 1922	104	25
*54 ⁴	2	Nov. 15, 1916	323		114	1	July 30, 1921	10	5
55	1	Aug. 28, 1915	149	15	115	2	Mar. 30, 1925	13	5
56	2	Sept. 26, 1923	344	60	116	1	Aug. 17, 1921	5	5
*57	2	May 11, 1916	64		117	2	July 3, 1922	6	5
58	2	June 22, 1923	93	30	118	1	Dec. 8, 1921	7	5
*59	1	Apr. 5, 1916	13		119	1	Feb. 6, 1922	3	5

¹ In press. For price see announcement card which will be issued when Circular No. 1 is printed.

² Superseded by C44.

³ This is a supplement to circular 47, giving additional information.

⁴ Superseded by H3 and H4.

DATA CONCERNING LATEST EDITIONS OF CIRCULARS—Continued

[Those Marked (*) Are Out of Print and no Longer Available]

Cir. No.	Edition	Date	No. of pages	Price	Cir. No.	Edition	Date	No. of pages	Price
120	1	Apr. 24, 1922	16	5	185	1	Aug. 2, 1924	3	5
121	1	July 17, 1922	14	5	186	1	July 25, 1924	4	5
122	2	Sept. 12, 1923	16	5	187	1	Aug. 2, 1924	3	5
123	2	Feb. 1, 1924	5	5	188	1	do.	4	5
124	1	July 27, 1922	4	5	189	1	Aug. 19, 1924	5	5
125	1	do.	3	5	190	1	Sept. 4, 1924	4	5
126	1	do.	5	5	191	1	do.	6	5
127	1	do.	4	5	192	1	Oct. 9, 1924	5	5
128	2	Feb. 1, 1924	5	5	193	1	Jan. 9, 1925	5	5
129	1	July 27, 1922	4	5	194	1	do.	6	5
130	1	do.	5	5	195	1	do.	5	5
131	1	do.	5	5	196	1	do.	3	5
132	2	Feb. 1, 1924	4	5	197	1	do.	4	5
133	1	Nov. 10, 1922	21	10	198	1	Feb. 3, 1925	8	5
134	2	June 30, 1924	6	5	199	1	Mar. 7, 1925	19	10
135	1	Oct. 16, 1922	14	5	200	1	Feb. 7, 1925	4	5
136	2	Jan. 12, 1924	4	5	201	1	Feb. 17, 1925	5	5
137	1	Feb. 23, 1923	19	10	202	1	Mar. 25, 1925	16	5
138	1	Mar. 21, 1923	33	10	203	1	Mar. 6, 1925	4	5
139	1	June 15, 1923	9	5	204	1	Mar. 23, 1925	7	5
140	1	Mar. 26, 1923	6	5	205	1	Mar. 7, 1925	5	5
141	1	Mar. 24, 1923	18	10	206	1	Apr. 16, 1925	6	5
142	1	Apr. 16, 1923	48	15	207	1	Apr. 1, 1925	6	5
143	1	June 25, 1923	5	5	208	1	May —, 1925	37	15
144	1	July 6, 1923	7	5	209	1	Apr. 30, 1925	4	5
145	1	Jan. 28, 1924	72	15	210	1	May 2, 1925	3	5
146	1	Sept. 25, 1923	6	5	211	1	Apr. 30, 1925	3	5
147	1	Sept. 19, 1923	8	5	212	1	May 9, 1925	5	5
148	1	Oct. 10, 1923	9	5	213	1	May 8, 1925	5	5
149	1	Feb. 1, 1924	5	5	214	1	May 21, 1925	4	5
150	1	Dec. 28, 1923	6	5	215	1	May 9, 1925	12	5
151	1	Jan. 9, 1924	66	15	216	1	do.	9	5
152	1	Dec. 8, 1923	7	5	217	1	May 22, 1925	2	5
153	1	Dec. 27, 1923	7	5	218	1	do.	2	5
154	1	May 29, 1924	175	30	219	1	do.	2	5
155	1	Apr. 8, 1924	11	5	220	1	do.	2	5
156	1	Mar. 1, 1924	4	5	221	1	do.	2	5
157	1	Apr. 8, 1924	10	5	222	1	do.	2	5
158	1	Mar. 25, 1924	3	5	223	1	do.	2	5
159	1	Apr. 8, 1924	10	5	224	1	do.	2	5
160	1	do.	9	5	225	1	do.	2	5
161	1	Mar. 1, 1924	5	5	226	1	do.	2	5
162	1	Apr. 8, 1924	7	5	227	1	do.	3	5
163	1	Feb. 20, 1924	11	5	228	1	do.	3	5
164	1	June 4, 1924	12	5	229	1	May 26, 1925	4	5
165	1	June 21, 1924	11	5	230	1	do.	3	5
166	1	Sept. 18, 1924	5	5	231	1	June 11, 1925	4	5
167	1	July 12, 1924	5	5	232	1	July 6, 1925	42	10
168	1	July 7, 1924	10	5	233	1	June 15, 1925	3	5
169	1	Aug. 12, 1924	37	10	234	1	do.	3	5
170	1	July 8, 1924	3	5	235	1	do.	4	5
171	1	do.	3	5	236	1	do.	3	5
172	1	do.	3	5	237	1	do.	3	5
173	1	do.	3	5	238	1	do.	3	5
174	1	do.	4	5	239	1	do.	2	5
175	1	do.	3	5	240	1	do.	3	5
176	1	do.	3	5	241	1	do.	4	5
177	1	do.	3	5	242	1	do.	3	5
178	1	do.	3	5	243	1	do.	3	5
179	1	do.	3	5	244	1	do.	3	5
180	1	do.	3	5	245	1	June 13, 1925	3	5
181	1	do.	3	5	246	1	June 11, 1925	3	5
182	1	July 23, 1924	4	5	247	1	June 13, 1925	3	5
183	1	Aug. 2, 1924	4	5	248	1	do.	3	5
184	1	do.	2	5	249	1	do.	3	5

DATA CONCERNING LATEST EDITIONS OF CIRCULARS—Continued

[Those Marked (*) Are Out of Print and no Longer Available]

Cir. No.	Edition	Date	No. of pages	Price	Cir. No.	Edition	Date	No. of pages	Price
250-----	1	June 11, 1925	3	5	265-----	1	June 26, 1925	5	5
251-----	1	June 13, 1925	3	5	266-----	1	do-----	5	5
252-----	1	do-----	2	5	267-----	1	June 20, 1925	3	5
253-----	1	June 11, 1925	3	5	268-----	1	July 7, 1925	3	5
254-----	1	June 13, 1925	3	5	269-----	1	do-----	4	5
255-----	1	June 20, 1925	2	5	270-----	1	June 26, 1925	5	5
256-----	1	June 18, 1925	4	5	271-----	1	July 18, 1925	7	5
257-----	1	June 26, 1925	3	5	272-----	1	July 7, 1925	4	5
258-----	1	June 20, 1925	3	5	273-----	1	do-----	4	5
259-----	1	June 26, 1925	5	5	274-----	1	do-----	4	5
260-----	1	do-----	3	5	275-----	1	Aug. 29, 1925	47	15
261-----	1	do-----	3	5	276-----	1	Aug. 5, 1925	28	20
262-----	1	do-----	3	5	277-----	1	July 7, 1925	4	5
263-----	1	do-----	3	5	278-----	1	do-----	4	5
264-----	1	June 20, 1925	3	5					

VIII. GOVERNMENT DEPOSITORY REFERENCE LIBRARIES

Congress designates in the several congressional districts certain libraries as "Government depository libraries." These are entitled to receive any or all groups of Government publications on the understanding that they are kept available for consultation by the general public.

In case the Bureau of Standards receives a request for a publication which can no longer be supplied, the bureau refers the correspondent to the nearest depository reference library at which this publication can be consulted.

The following libraries (arranged by States) maintain reference files of bureau publications. Except where marked "Complete," initial letters indicate the series which are available:

S, Scientific Papers.

T, Technologic Papers.

C, Circulars.

H, Handbooks.

A, Annual reports.

W, Reports of Weights and Measures Conferences.

M, Miscellaneous publications.

Location	Library	Publications received	Location	Library	Publications received
ALABAMA			DELAWARE		
Auburn.....	Alabama Polytechnic Institute.	STCAWM.	Dover.....	Delaware State.....	SA.
Birmingham.....	Howard College.....	STHWM.	Newark.....	University of Delaware.	STCA.
Montgomery.....	Public.....	Complete.	Wilmington.....	Wilmington Institute Free.	Complete.
Tuskegee Institute.	State Capitol.....	Do.	DISTRICT OF COLUMBIA		
University.....	Tuskegee Institute	STCH.	Washington.....		
	University of Alabama.	Complete.		Department of Agriculture.	Do.
ALASKA				Department of Interior.	Do.
Fairbanks.....	Alaska Agricultural College and School of Mines.	Complete.		Department of Justice.	HA.
Juneau.....	Alaska Historical Library and Museum	SW.		Navy Department Treasury Department.	STCHW. A.
ARIZONA			FLORIDA		
Phoenix.....	Arizona State.....	A.	De Land.....	John B. Stetson University.	STA.
Tucson.....	Phoenix Public.....	STC.	Gainesville.....	University of Florida.	Complete.
	University of Arizona.	Complete.	Jacksonville.....	Jacksonville Public.	STCHWM.
ARKANSAS			Winter Park.....	Rollins College.....	S.
Conway.....	Hendrix College.....	STCHWM.	GEORGIA		
Fayetteville.....	University of Arkansas.	STCAWM.	Athens.....	University of Georgia.	Complete.
Jonesboro.....	State Agricultural School.	ST.	Atlanta.....	Carnegie.....	Do.
CALIFORNIA				Georgia State.....	W.
Berkeley.....	University of California.	Complete.	Savannah.....	Savannah Public.	STC.
Claremont.....	Pomona College.....	Do.	HAWAII		
Eureka.....	Eureka Free.....	Do.	Honolulu.....	University of Hawaii.	Complete.
Fresno.....	Fresno County Free.	Do.	IDAHO		
Los Angeles.....	Los Angeles Public.	Do.	Boise.....	Idaho State.....	STAM.
Oakland.....	Oakland Free.....	Do.	Moscow.....	University of Idaho.	Complete.
Riverside.....	Riverside Public.....	Do.	Pocatello.....	Idaho Technical Institute.	Do.
Sacramento.....	California State.....	Do.	ILLINOIS		
San Diego.....	City Free.....	Do.	Belleville.....	Belleville Public.....	STC.
San Francisco.....	San Diego Public.	STCHM.	Bloomington.....	Illinois Wesleyan University.	Complete.
	Mechanics Mercantile.	Complete.	Chicago.....	Chicago Public.....	Do.
	San Francisco Public.	Do.		John Crerar.....	Do.
Stanford University.	Leland Stanford, Jr., University.	Do.		Newberry.....	H.
Stockton.....	Stockton Free Public.	STCHM.		St. Ignatius High School.	STAM.
COLORADO				University of Chicago.	Complete.
Boulder.....	University of Colorado.	Complete.	Danville.....	Danville Public.....	S.
Colorado Springs	Colorado College.....	Do.	Evanston.....	Northwestern University.	STCAWM.
Denver.....	Colorado State.....	Do.	Freeport.....	Freeport Public.....	STCHAW.
	Public.....	Do.	Galesburg.....	Free Public.....	Complete.
	Regis College.....	SA.	Jacksonville.....	Jacksonville Public.	Do.
	University of Denver.	Complete.	Lisle.....	St. Procopius College.	ST.
Fort Collins.....	State Agricultural College.	Do.	McLeansboro.....	Mary E. C. McCoy Memorial.	Complete.
Pueblo.....	McClelland Public.	TC.	Monmouth.....	Monmouth College.	STA.
CONNECTICUT			Normal.....	Illinois State Normal University.	Complete.
Bridgeport.....	Bridgeport Public.	Complete.	Peoria.....	Peoria Public.....	Do.
Hartford.....	Connecticut State Trinity College.....	STCAW.	Rockford.....	Illinois State.....	STCHWM.
Middletown.....	Wesleyan University.	Complete.	Springfield.....	Illinois State.....	Complete.
New Haven.....	Yale University.....	Do.	Urbana.....	University of Illinois.	Do.
Storrs.....	Connecticut Agricultural College.	STCHWM.			
Waterbury.....	Silas Bronson.....	STCH.			

Location	Library	Publications received	Location	Library	Publications received
INDIANA			MAINE		
Bloomington....	Indiana University.....	Complete.	Augusta.....	Maine State.....	STCHWM.
Crawfordsville..	Wabash College....	Do.	Brunswick.....	Bowdoin College..	Complete.
Fort Wayne.....	Public.....	Do.	Lewiston.....	Bates College....	STCAM.
Greencastle.....	Depauw University.	Do.	Orono.....	University of Maine.	Complete.
Hanover.....	Hanover College....	STC.	Portland.....	Portland Public... Do.	
Indianapolis....	Indiana State.....	Complete.	Saco.....	Dyer.....	STCH.
	Indianapolis Public.	Do.	Waterville.....	Colby College....	STC.
La Fayette.....	Purdue University.	Do.	MARYLAND		
Merom.....	Union Christian College.	STA.	Annapolis.....	Maryland State... A.	
Muncie.....	Public.....	STCHWM.		United States Naval Academy.	ST.
Notre Dame.....	University.....	Complete.	Baltimore.....	Baltimore City... Complete.	
Richmond.....	Morrison Reeves... STC.			Enoch Pratt Free Do.	
Terre Haute....	Indiana State Normal.	Complete.		Johns Hopkins University.	Do.
IOWA				Peabody Institute Do.	
Ames.....	Iowa State College.	Complete.	Chestertown....	Washington College.	STCW.
Council Bluffs..	Free Public.....	STH.	Westminster....	Western Maryland College.	ST.
Des Moines.....	Iowa State.....	STCHAW.	MASSACHUSETTS		
	Public.....	STCHAM.			
Dubuque.....	Carnegie-Stout Free Public.	T.	Amherst.....	Amherst College.. Complete.	
Fairfield.....	Fairfield Free Public.	Complete.		Massachusetts Agricultural College.	Do.
Fayette.....	Upper Iowa University.	STH.	Boston.....	Boston Public... Do.	
Grinnell.....	Grinnell College.. Complete.			State Library of Massachusetts.	Do.
Iowa City.....	State University of Iowa.	Do.	Cambridge.....	Harvard College.. Do.	
Mount Pleasant	Iowa Wesleyan College.	SCW.	Lynn.....	Lynn Public..... STCAWM	
Mount Vernon..	Cornell College....	STM.	New Bedford....	Public.....	TCHA.
Sioux City.....	Sioux City Public.	Complete.	Salem.....	Essex Institute... STA.	
KANSAS			Tufts College....	Tufts College.... STCA.	
Baldwin.....	Baker University.. Complete.		Williamstown... Complete.	Williams College.. Do.	
Emporia.....	Kansas State Teachers College.	STC.	Worcester.....	American Anti-quarian Society.	Do.
Lawrence.....	University of Kansas.	Complete.	MICHIGAN		
Manhattan.....	Kansas State Agricultural College.	Do.	Ann Arbor.....	University of Michigan.	Complete.
Pittsburg.....	Pittsburg Public.. Do.		Battle Creek....	Public.....	W.
Topeka.....	Kansas State..... STCWM.		Detroit.....	Detroit College.. T.	
KENTUCKY			East Lansing....	Michigan State Agricultural College.	Complete.
Danville.....	Center College....	Complete.			Do.
Glasgow.....	Glasgow Library Association.	SH.	Grand Rapids..	Grand Rapids Public.	Do.
Henderson.....	Henderson Public.	Complete.	Houghton.....	Michigan College of Mines.	Do.
Lexington.....	University of Kentucky.	Do.	Kalamazoo.....	Public.....	Do.
Louisville.....	Louisville Free Public.	Do.	Lansing.....	Michigan State... Do.	
Murray.....	Murray State Normal School.	CAW.	Muskegon.....	Hackley Public... STCAW.	
Somerset.....	Carnegie Public... ST.		Orchard Lake... STCHAM.	Polish Seminary.. Complete.	
Winchester.....	Kentucky Wesleyan College.	STCHAM.	Port Huron.....	Public.....	Do.
LOUISIANA			Saginaw.....	Hoyt Public.....	
Baton Rouge....	Louisiana State University.	Complete.	MINNESOTA		
Natchitoches...	State Normal School.	STA.	Duluth.....	Duluth Public.... STC.	
New Orleans....	Howard Memorial.	STWM.	Fergus Falls... H.	Carnegie Public... Complete.	
	Louisiana State Museum.	Complete.	Minneapolis....	University of Minnesota.	Do.
	New Orleans Public.	Do.	St. Paul.....	Minnesota Historical Society.	A.
	Tulane University.	Do.		Minnesota State.. Complete.	
Shreveport.....	Shreveport Memorial.	Do.	MISSISSIPPI		
			Agricultural College.	Mississippi Agricultural and Mechanical College.	Complete.
			Greenville.....	Greenville Public.	Do.

Location	Library	Publications received	Location	Library	Publications received
MISSOURI			NEW MEXICO		
Cape Girardeau	State Teachers' College.	Complete.	Albuquerque	University of New Mexico.	Complete.
Columbia	University of Missouri.	Do.	East Las Vegas	New Mexico Normal University.	Do.
Fulton	Westminster College.	Do.	State College	New Mexico College of Agriculture and Mechanical Arts.	Do.
Jefferson City	Missouri State.	ST.	NEW YORK		
Kansas City	Kansas City Public.	Complete.	Albany	New York State.	Do.
Liberty	Rockhurst College	STCHWM.	Brooklyn	Brooklyn Public.	Do.
Rolla	William Jewell College.	Complete.	Pratt	Institute	Do.
St. Joseph	Missouri School of Mines.	STCWM.	Buffalo	Free.	Do.
St. Louis	St. Joseph Public.	STCHW.	Buffalo	Buffalo Public.	Do.
	St. Louis Public.	Complete.		Grosvenor	Do.
	St. Louis University.	Do.	Canton	St. Lawrence University.	STCAWM.
	Washington University.	Do.	Glens Falls	Crandall Free.	ST.
Springfield	Drury College Library.	STCHWM.	Hamilton	Colgate University.	Complete.
Warrensburg	Central Missouri State Teachers College.	SCHAW.	Ithaca	Cornell University.	Do.
MONTANA			Keuka Park	Keuka College.	S.
Bozeman	Montana State College.	Complete.	Newburgh	Newburgh Free.	ST.
Butte	Montana State School of Mines.	Do.	New York	College of the City of New York.	Complete.
Helena	Helena Public.	Do.		Columbia University.	Do.
	Historical Society of Montana.	Do.		New York Public, Astor Branch.	Do.
Lewistown	Fergus County High School.	STCAM.		New York Public, Lenox Branch.	Do.
Missoula	State University.	Complete.		New York University.	Do.
NEBRASKA				The New York World.	A.
Blair	Dana College.	T.	Poughkeepsie	Adrianse Memorial.	ST.
Fremont	Midland College.	STCWM.	Rochester	Rochester University.	Complete.
Lincoln	Nebraska State University of Nebraska.	Complete.	Schenectady	Union College.	Do.
Omaha	Omaha Public.	Do.	Syracuse	Syracuse University.	Do.
NEVADA			Troy	Troy Public.	Do.
Carson City	Nevada State.	STAM.	Utica	Utica Public.	STC.
Reno	University of Nevada.	Complete.	NORTH CAROLINA		
NEW HAMPSHIRE			Chapel Hill	University of North Carolina.	Complete.
Concord	New Hampshire State.	STA.	Durham	Trinity College.	Do.
Durham	New Hampshire State College.	STCHAW.	Newton	Catawba College.	STC.
Hanover	Dartmouth College.	Complete.	Raleigh	North Carolina State College of Agriculture and Engineering.	Complete.
Laconia	Laconia Public.	STC.		North Carolina State.	Do.
Manchester	City.	Complete.	Wake Forest	Wake Forest College.	S.
NEW JERSEY			Washington	Public Schools.	Do.
Atlantic City	Free Public.	STCHWM.	NORTH DAKOTA		
Bayonne	do.	Do.	Agricultural College.	North Dakota Agricultural College.	STCAW.
Camden	Camden Free Public.	STC.	Bismarck	North Dakota State.	TC.
Elizabeth	Public.	Complete.	University	State University of North Dakota.	Complete.
Jersey City	Free Public.	Do.	Valley City	State Teachers College.	STCW.
Newark	do.	Do.			
New Brunswick	do.	Do.			
Princeton	Rutgers College.	Do.			
	Princeton University.	Do.			
Trenton	Free Public.	STCHAM.			
	New Jersey State.	Complete.			

Location	Library	Publications received	Location	Library	Publications received
OHIO			PENNSYLVANIA—continued		
Alliance.....	Mount Union College.	Complete.	Philadelphia.....	Free.....	Complete.
Athens.....	Ohio University..	STA.		Library Company of Philadelphia, Ridgway Branch.	Do.
Chillicothe.....	Public.....	STH.		Mercantile.....	S.
Cincinnati.....	do.....	Complete.		Philadelphia Museum.	STCHWM
Cleveland.....	Western Reserve University.	Do.		University of Pennsylvania.	Complete.
	Case.....	Do.	Pittsburgh.....	Carnegie Free of Allegheny.	STCH.
Columbus.....	Cleveland Public.	Do.		Carnegie.....	Complete.
	Columbus Public.	Do.		University of Pittsburgh.	Do.
	Ohio State.....	Do.	Scranton.....	Scranton Public..	STHAM
Dayton.....	Ohio State University.	Do.	State College.....	Pennsylvania State College.	Complete.
Delaware.....	Dayton Public..	Do.		Swarthmore College.	Do.
	Ohio Wesleyan University.	STCHAW.		Warren Library Association.	STH.
Gambier.....	Kenyon College..	Complete.	Washington.....	Washington and Jefferson College.	Complete.
Granville.....	Denison University.	STAM.		Wilkes-Barre....	STCWM.
	Hiram College..	STCAWM.	Williamsport....	Wyoming Historical and Geological Society.	ST.
Hiram.....	Marietta College.	Complete.		James V. Brown..	
Marietta.....	Oberlin College..	Do.	PHILIPPINE ISLANDS		
Oberlin.....	Miami University.	Do.	Manila.....	Philippine Library and Museum.	Complete.
Oxford.....	Sidney Public..	STCM.	RHODE ISLAND		
Sidney.....	Warder Public..	Complete.	Kingston.....	Rhode Island State College.	Complete.
Springfield.....	Toledo Public..	Do.	Providence.....	Brown University.	Do.
Toledo.....	Brumback.....	STCHM.		Providence Public.	Do.
Van Wert.....	Reuben McMillan Free.	Do.	Westerly.....	Rhode Island State.	Do.
Youngstown....				Westerly Public..	H.
OKLAHOMA			SOUTH CAROLINA		
Ada.....	East Central State Normal School.	ST.	Charleston.....	Charleston College.	STH.
Alva.....	Northwestern State Teachers College.	STHA.		Charleston Library Society.	ST.
Enid.....	Enid Carnegie..	STCHM.	Clemson.....	Clemson Agricultural College.	Complete.
Miami.....	Miami Public..	T.	Clinton.....	Presbyterian College of South Carolina.	Do.
Norman.....	University of Oklahoma.	Complete.	Columbia.....	University of South Carolina.	STCAWM.
Oklahoma City..	Oklahoma State..	STCAW.	Rockhill.....	Winthrop College.	A.
Stillwater.....	Oklahoma Agricultural and Mechanical College.	Complete.	SOUTH DAKOTA		
Tahlequah.....	Northeastern State Teachers College.	STCA.	Brookings.....	South Dakota State College.	Complete.
OREGON			Huron.....	Huron College..	S.
Corvallis.....	Oregon Agricultural College.	TCHAWM.	Mitchell.....	Dakota Wesleyan University.	ST.
Eugene.....	University of Oregon.	Complete.	Pierre.....	South Dakota State.	ST.
Forest Grove....	Pacific University.	STCH.	Sioux Falls.....	Carnegie Free Public.	STCHA.
Portland.....	Library Association of Portland.	Complete.	Vermilion.....	University of South Dakota.	Complete.
	Reed College.....	Do.	Yankton.....	Yankton College..	SAM.
Salem.....	Oregon State.....	Do.			
PENNSYLVANIA					
Bethlehem.....	Lehigh University	STCHAW.			
Bradford.....	Carnegie Public..	STCA.			
Erie.....	Erie Public.....	STCW.			
Gettysburg.....	Gettysburg College.	STC.			
Harrisburg.....	Pennsylvania State.	Complete.			
Haverford.....	Haverford College.	STCAWM.			
Huntingdon.....	Junata College..	S.			
Lancaster.....	Franklin and Marshall College.	S.			
Meadville.....	Allegheny College.	ST.			

Location	Library	Publications received	Location	Library	Publications received
TENNESSEE			VIRGINIA—con.		
Chattanooga....	Chattanooga Public.	Complete.	Lexington.....	Virginia Military Institute.	Complete.
Johnson City...	Wayne Williams Public.	Do.		Washington and Lee University.	Do.
Knoxville.....	University of Tennessee.	Do.	Richmond.....	Virginia State.	Do.
McKenzie.....	Bethel College....	C.	Salem.....	Roanoke College..	Do.
Memphis.....	Cossitt.....	Complete.	University.....	University of Virginia.	Do.
Murfreesboro...	Middle Tennessee State Normal.	STCAW.	University of Richmond.	University of Richmond.	ST.
Nashville.....	Carnegie Library. Vanderbilt University.	Complete. Do.	WASHINGTON		
TEXAS			Everett.....	Everett Public....	SCHAM.
Austin.....	Texas State University of Texas.	Complete. Do.	Olympia.....	Washington State.	STCH.
Clarendon.....	Clarendon College.	S.	Pullman.....	State College of Washington.	Complete.
College Station.	Agricultural and Mechanical College.	Complete.	Seattle.....	Seattle Public....	Do.
Dallas.....	Dallas Public....	STCAW.		University of Washington.	Do.
El Paso.....	Public.....	Complete.	Spokane.....	Spokane Public....	Do.
Fort Worth.....	Carnegie Public..	Do.	Tacoma.....	Tacoma Public....	STCHWM.
	Texas Christian University.	Do.	Walla Walla....	Whitman College..	Complete.
Galveston.....	Rosenberg.....	Do.	WEST VIRGINIA		
Georgetown.....	Southwestern University.	Do.	Athens.....	Concord State Normal School.	SCWM.
Houston.....	Houston Public...	Do.	Charleston.....	State.....	Complete.
San Antonio....	Carnegie.....	ST.	Fairmont.....	Fairmont State Normal.	ST.
Waco.....	Baylor.....	Complete.	Institute.....	West Virginia Collegiate Institute.	Complete.
UTAH			Montgomery...	New River State School.	SA.
Ephraim.....	Snow College.....	Complete.	Morgantown...	West Virginia University.	Complete.
Logan.....	Utah Agricultural College.	Do.	WISCONSIN		
Ogden.....	Carnegie Free....	STCHAM.	Appleton.....	Lawrence College.	ST.
Provo.....	Brigham Young University.	Complete.	Beloit.....	Beloit College....	Complete.
Salt Lake City..	University of Utah.	Do.	Eau Claire.....	Eau Claire Public.	STCAWWM.
VERMONT			Fond du Lac...	Fond du Lac Public.	SW.
Burlington.....	University of Vermont.	Complete.	La Crosse.....	La Crosse Public..	A.
Middlebury.....	Middlebury College.	Do.	Madison.....	State Historical Society.	Complete.
Montpelier.....	Vermont State....	Do.		State.....	CHAW.
Northfield.....	Norwich University.	Do.	Milwaukee.....	Milwaukee Public.	Complete.
VIRGINIA			Racine.....	Racine Public....	Do.
Blacksburg.....	Virginia Polytechnic Institute.	Complete.	Superior.....	Superior Public...	ST.
Bridgewater....	Bridgewater College.	STA.	WYOMING		
Emory.....	Emory and Henry College.	S.	Cheyenne.....	Wyoming State...	STCHWM.
			Laramie.....	University of Wyoming.	Complete.

IX. SCIENTIFIC PAPERS

S509. Alternating Current Distribution in Cylindrical Conductors . . Chester Snow

General theory of propagation of periodic waves along parallel cylindrical conductors and dielectrics. The existence and uniqueness of scalar and vector potentials is proven and their properties examined by the construction of a generalized Green's function and an analogous magnetic flux function. From the formal solutions, the physical concepts, coefficients of leakage, capacity, resistance, and inductance, and the propagation constant are given as functions of the frequency which reduce to the ordinary constants in case the frequency is so low or the cross section of the conductors so small that the current distribution is practically uniform in each section. High-frequency formulas are obtained for these quantities in the case of two unequal circular cylinders having different electrical constants. (July 24, 1925.) pp. 62. Price, 10 cents.

X. TECHNOLOGIC PAPERS

T290. Relation Between the Heating Value of Gas and Its Usefulness to the
the Customer.....E. R. Weaver

This paper contains a critical review of the data which have been made public regarding the relation between the heating value of gas and its usefulness to the customer. The data are divided into two classes—those relating to direct observations of the useful effects from the utilization of gases of different qualities in the appliances in common use and statistical data showing changes in quantity of gas used which accompanied changes in heating value. It is found that there is general agreement both between the two classes of data and within each class. Some of the consequences of the relation found are pointed out. (July 19, 1925.) pp. 117. Price, 30 cents.

XI. CIRCULARS

C1. National Bureau of Standards.

Gives general information concerning the organization, functions, and work of the bureau. Cites accomplishments and includes illustrations typical of work in laboratories and facilities for same.

C268. United States Government Master Specification for Steam Hose.

This specification was officially adopted by the Federal Specifications Board on October 6, 1922, for the use of the departments and independent establishments of the Government in the purchase of steam hose. The specification was prepared in cooperation with the Rubber Association of America. The hose is of wrapped construction, consisting of a rubber tube, cotton duck reinforcements, and a rubber cover.

C269. United States Government Master Specification for Rubber-Metal Gasoline Hose.

This specification was officially adopted by the Federal Specifications Board on May 1, 1924, for the use of the departments and independent establishments of the Government in the purchase of rubber-metal gasoline hose. The specification was prepared in cooperation with the Rubber Association of America. The hose is made with a flexible metal tube, a rubber tube, and a cotton jacket, in lengths of 10, 12, or 25 feet as ordered, and is adapted for use in conducting gasoline.

C270. United States Government Master Specification for Mercerized Cotton Airplane Cloth, Grade A.

This specification is intended to cover the Government's requirements for mercerized cotton airplane cloth, grade A. This specification was prepared by the technical committee on textiles of the Federal Specifications Board and officially promulgated December 6, 1924. In its preparation the committee had the cooperation of the National Association of Cotton Manufacturers and the American Cotton Manufacturers Association, so that the requirements specified are essentially in agreement with commercial practice.

C271. United States Government Master Specification for Rubber Gloves for Electrical Workers (For Use in Connection with Apparatus or Circuits not Exceeding 3,000 Volts to Ground).

This specification was officially approved by the Federal Specifications Board on July 6, 1925, for the use of the departments and independent establishments of the Government in the purchase of rubber gloves for electrical workers. The technical requirements of this specification are the same as those of Standard Specification D-120-23, adopted by the American Society for Testing Materials. Two classes of gloves are provided for. Class A gloves are intended for use with external protection of leather or other materials.

**C272. United States Government Master Specification for Brown Cotton Sheet-
ing.**

This specification is intended to cover the Government's requirements for brown cotton sheeting. This specification was prepared by the technical committee on textiles of the Federal Specifications Board and officially promulgated July 6, 1925. In its preparation the committee had the cooperation of the National Association of Cotton Manufacturers and the American Cotton Manufacturers Association, so that the requirements specified are essentially in agreement with commercial practice.

**C273. United States Government Master Specification for Bleached Wide
Cotton Sheetting.**

This specification is intended to cover the Government's requirements for bleached wide cotton sheeting. This specification was prepared by the technical committee on textiles of the Federal Specifications Board. In its preparation the committee had the cooperation of the National Association of Cotton Manufacturers and the American Cotton Manufacturers Association, so that the requirements specified are essentially in agreement with commercial practice.

**C274. United States Government Master Specification for Bleached Cotton
Sheets (Medium and High Count Sheetting).**

This specification is intended to cover the Government's requirements for bleached cotton sheets of medium and high counts. This specification was prepared by the technical committee on textiles of the Federal Specifications Board. In its preparation the committee had the cooperation of the National Association of Cotton Manufacturers and the American Cotton Manufacturers Association, so that the requirements specified are essentially in agreement with commercial practice.

C275. United States Government Master Specification for Builders Hardware.

This specification was prepared by the technical committee for builders hardware of the Federal Specifications Board for the use of all Government departments and independent establishments in the purchase of builders hardware, and covers such items as door locks, hinges, latches, catches, turns, bolts, brackets, pivots, door closers, transom lifters and operators, and cabinet locks. Standard finishes, rules for hands of locks, and correct sizes of butts are described. Methods for testing nickel plating, zinc coatings, and japan coating are specified.

C276. Motor-Vehicle Headlighting.

Requirements for good road lighting are discussed and the construction and operation of present-day types of electric headlights explained. Few so-called antiglare devices have been found to be really effective, and the most practical solution to the headlighting problem under present conditions is the proper adjustment of lighting devices by manufacturers and sales agencies on new cars and careful maintenance of such adjustments by owners and drivers. The methods used at the Bureau of Standards for making laboratory tests on electric headlight devices are briefly described. State law is presented. The Appendix contains the specifications under which tests for approval of devices by State officials are made.

C277. United States Government Master Specification for Bleached Cotton Pillowcases.

This specification is intended to cover the Government's requirements for bleached cotton pillowcases. This specification was prepared by the technical committee on textiles of the Federal Specifications Board and officially promulgated. In its preparation the committee had the cooperation of the National Association of Cotton Manufacturers and the American Cotton Manufacturers Association, so that the requirements specified are essentially in accord with commercial practice.

C278. United States Government Master Specification for Brown Wide Cotton Sheeting.

This specification is intended to cover the requirements of the Government for brown wide cotton sheeting. This specification was prepared by the technical committee on textiles of the Federal Specifications Board and officially promulgated. In its preparation the committee had the cooperation of the National Association of the Cotton Manufacturers and the American Cotton Manufacturers Association, so that the requirements specified are essentially in agreement with commercial practice.

C279. Relations Between the Temperatures, Pressures, and Densities of Gases.

This paper gives a simple but thorough discussion of the relations between the temperatures, pressures, volumes, and weights of gases. The experimental data involving high pressures, such as are encountered in the commercial handling of compressed gases, are presented in a form which permits of ready application. The compressibilities of gases as calculated from the equations of state of van der Waals, of Dieterici, and of Berthelot are compared with existing data for the purpose of estimating their accuracy in predicting the compressibilities of gases for which no experimental data are available. There is also included an extensive bibliography of the literature covering the subjects of the circular.

XII. MISCELLANEOUS PUBLICATIONS

M65. National Directory of Commodity Specifications: Classified and Alphabetical Lists and Brief Descriptions of Existing Commodity Specifications

This contains an alphabetical list of such commodities as are paid for out of taxes and also a thoroughly classified list of the specifications for these commodities formulated not only by the public purchasing agencies, but also by other organizations having national recognition. In collecting the specifications correspondence was carried on with over 500 public purchasing organizations and more than 500 technical societies and trade associations vitally interested in specifications. The work has been carried on cooperatively by the Bureau of Foreign and Domestic Commerce and the Bureau of Standards in accordance with detailed plans formulated or approved by an advisory board, composed of representatives of 14 national organizations interested in the preparation and unification of specifications, as follows: American Electric Railway Association, American Engineering Standards Committee, American Hospital Association, American Hotel Association, American Society for Testing Materials, Associated Business Papers (Inc.), Associates for Government Service (Inc.), Chamber of Commerce of the United States, National Association of Manufacturers, National Association of Purchasing Agents, National Conference of Business Paper Editors, National Conference of Governmental Purchasing Agents, National Electric Light Association, and the Society of Automotive Engineers. (August 28, 1925.) 385 pp. Price, \$1.25.

XIII. PUBLISHED PAPERS BY THE BUREAU STAFF PRINTED IN OUTSIDE JOURNALS ON SUBJECTS WITHIN THE BUREAU'S FIELD OF WORK

[June, 1923, to May, 1925. For papers prior to this see Annual Reports of 1922 and 1923]

1. WEIGHTS AND MEASURES

- A study of sieve specifications (Lewis V. Judson), *Proc. of Am. Soc. for Test. Mats.*, 24, pt. II, p. 1084; 1924.
- Some recent results obtained in standardization of geodetic base-line tapes (L. V. Judson and B. L. Page), *Jour. Wash. Acad. of Sci.*, 14, p. 340; August 19, 1924.
- Notes on the graduation of invar base-line tapes (L. V. Judson and B. L. Page), *Jour. Wash. Acad. of Sci.*, 14, p. 342; August 19, 1924.
- Are your sieves standardized? (Lewis V. Judson), *Chem. Metl. Eng.*, 13, p. 823; November 24, 1924.
- New ruling for haemacytometer chambers (Lewis V. Judson), *Jour. Am. Med. Assn.*, 84, p. 947; March 28, 1925; *Jour. Opt. Soc.*; May, 1925.
- Thermal expansion of aluminum and various important aluminum alloys (Peter Hidnert), *Chem. and Met.*; 1925.
- Thermal expansion of molybdenum (Peter Hidnert and W. B. Gero) (abstract), *Sci. Abstracts* (Abst. 589); March, 1925.
- Observations on the "hydrogen point" in iron (Henry S. Rawdon and Peter Hidnert) (abstract in press), *Phys. Rev.*
- Physical properties of dental material (progress report) (Wilmer Souder), *Jour. Am. Dental Assn.*; 1925.
- Physical properties of dental materials II (wrought gold) (R. L. Coleman), *Jour. Am. Dental Assn.*; May, 1925.
- Continuous motion to the dividing engine carriage (abstract) (Wilmer Souder), *Progress of Opt. Soc. of Am.*; October, 1923.
- Analysis of track scale tolerances (H. M. Roeser), *Scale Jour.*; August 10, 1923.
- Weighing cars and trucks one end at a time (H. M. Roeser), *Scale Jour.*; May 10, 1924.
- Determining the constants of oil decline curves (H. M. Roeser), *Min. and Met.*; June, 1924.
- Note on the nature of the correlation coefficient (H. M. Roeser), *Am. Math. Monthly*, 31; September, 1924.
- The relation between inches and millimeters (H. W. Bearce), *Am. Mach.*, 59, No. 21, p. 764; November 22, 1923.
- Precision measuring instruments used in gauge inspection (George K. Burgess), *Army Ordnance*, 4, No. 12, pp. 375-380; May-June, 1924.
- Unilateral and bilateral tolerances as applied to interchangeable manufacture (H. W. Bearce), *Mech. Eng.*, 47, No. 6, pp. 485-487; June, 1925.
- The work of the International Bureau of Weights and Measures (abstract) (Lewis V. Judson), *Jour. Wash. Acad. of Sci.*; March 4, 1924.
- A plotting instrument (A. H. Sellman), *Jour. Opt. Soc. of Am. and Rev. of Sci. Inst.*, 8, p. 693; May, 1924.
- Gages, a key problem (G. K. Burgess), *Proc. Soc. Aut. Engrs.*, 16, p. 456; April, 1925.

2. ELECTRICITY

- Use of an oscillograph in mechanical measurements (H. L. Curtis), *Jour. Am. Inst. Elect. Engrs.*, 44, p. 45; January, 1925.
- The standardization of electrical measuring instruments (H. B. Brooks), *Jour. Am. Inst. Elect. Engrs.*, 42, p. 713; July, 1923.
- Accuracy tests of meggers (H. B. Brooks), *Elect. World*, 85; 1925.

- Nondestructive testing of wire rope (R. L. Sanford), *Min. and Met.*, 4, p. 333; July, 1923; *Power*, 58, p. 1031; December, 1923.
- The present status of magnetic analysis (R. L. Sanford), *Trans. Amer. Soc. Steel Treat.*, 5, p. 577; June, 1924.
- New developments in electric telemeters (O. S. Peters and R. S. Johnston), *Proc. Am. Soc. Test. Mat.*, 23, p. 592; 1923. Abstract in *Engrs. News-Record*, 91, p. 27; 1923.
- Batteries for airplane service (G. W. Vinal), *Aeronaut. Digest*, 3, p. 162; September, 1923.
- E. M. F. of cells at low temperatures (G. W. Vinal and F. W. Altrup), *Railway Signalling*, 16, p. 449; November, 1923.
- The tarnishing and detarnishing of silver (G. W. Vinal and G. N. Schramm), *Metal Industry*, 22, p. 15; January; p. 110, March; p. 151, April; p. 231, June, 1924.
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XIV. SUBJECT INDEX TO NEW PUBLICATIONS

The consolidated index in Circular 24 is designed to include citations to titles, cross references, and subsidiary topics of all printed publications of the bureau listed in that circular. The following index supplements the index in Circular 24 by giving the additional index references to cover new publications announced in this supplementary list. The circular, supplementary list, and the two indexes contained therein cover all bureau publications up to the date the supplement goes to print.

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