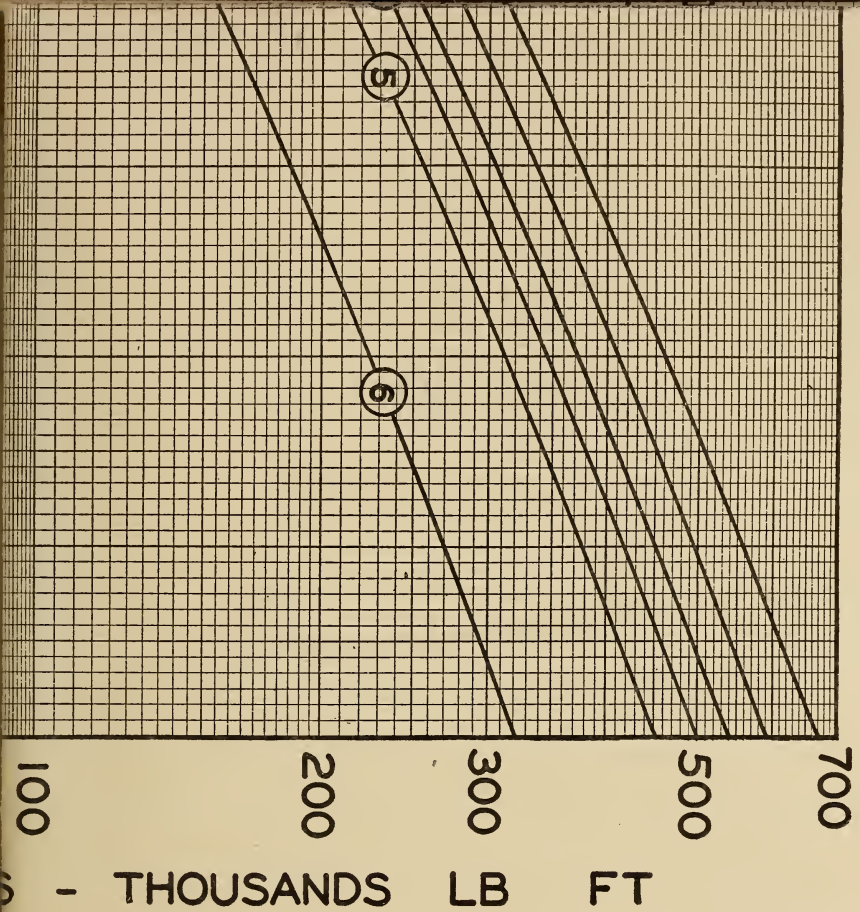


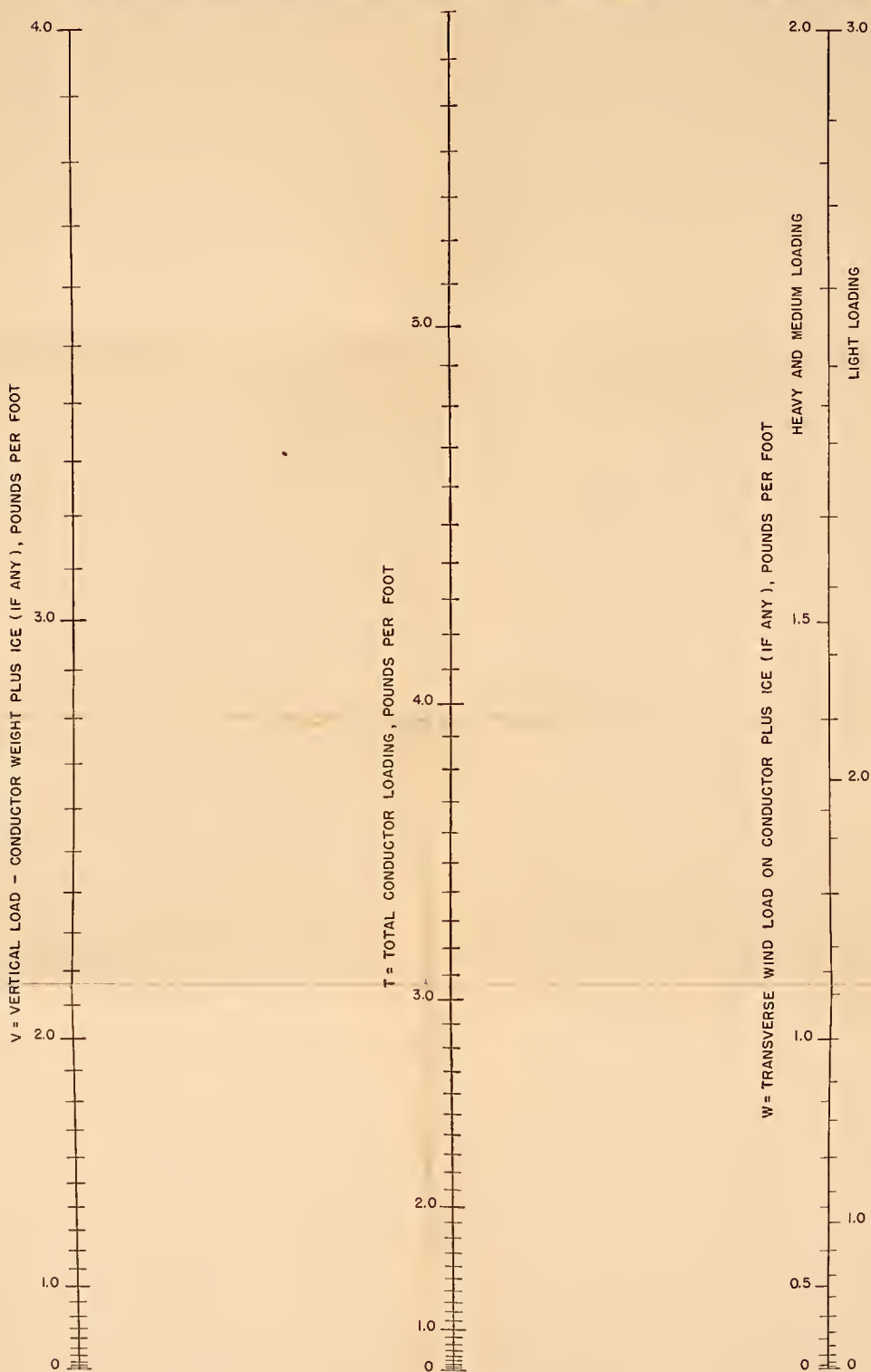
MISCELLANEOUS PUBLICATION M176
CHART 2B

WOOD POLES



CONDUCTOR LOADING NOMOGRAPH

VERTICAL, TRANSVERSE AND CONDUCTOR LOADS - LB PER LINEAR FT OF CONDUCTOR



CONNECT V AND W WITH STRAIGHT EDGE AND READ T

Chart 1A.—Conductor loading nomograph, vertical, transverse, and conductor loads—pounds per linear foot of conductor
 (Enlarged from fig. 16 of Discussion Handbook H39, NESC, part 2)

Note.—This device provides a sufficiently precise graphic method of determining “conductor loading” values, except for certain conductors when used in the light-loading district. However, in determining permissible sags and tensions in such a district, the variations found between the values obtained by this chart and values computed in accordance with rule 251, part 2, NESC (H32) are of little importance, since one of the unloaded tension limits of rule 261,F,4 will control, except for unusually long spans.

F = TOTAL CON

TICAL LOAD -



MISCELLANEOUS PUBLICATION M176
CHART 1B

ING NOMOGRAPH

LOADS - LB PER LINEAR FT OF CONDUCTOR

0.5 0.75

EDIUM LOADING

0.7



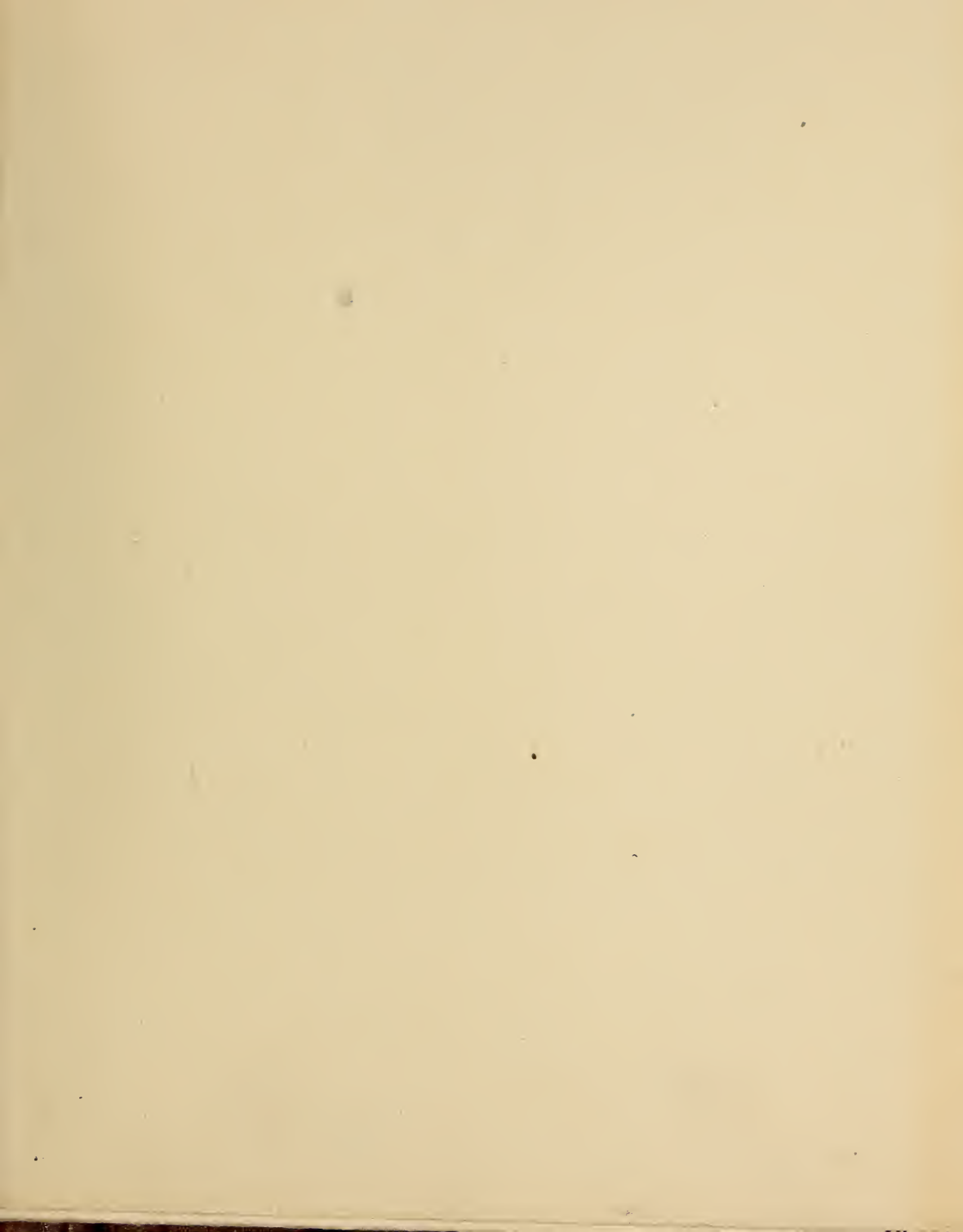
CONDUCTOR LOADING NOMOGRAPH

VERTICAL, TRANSVERSE AND CONDUCTOR LOADS - LB PER LINEAR FT OF CONDUCTOR

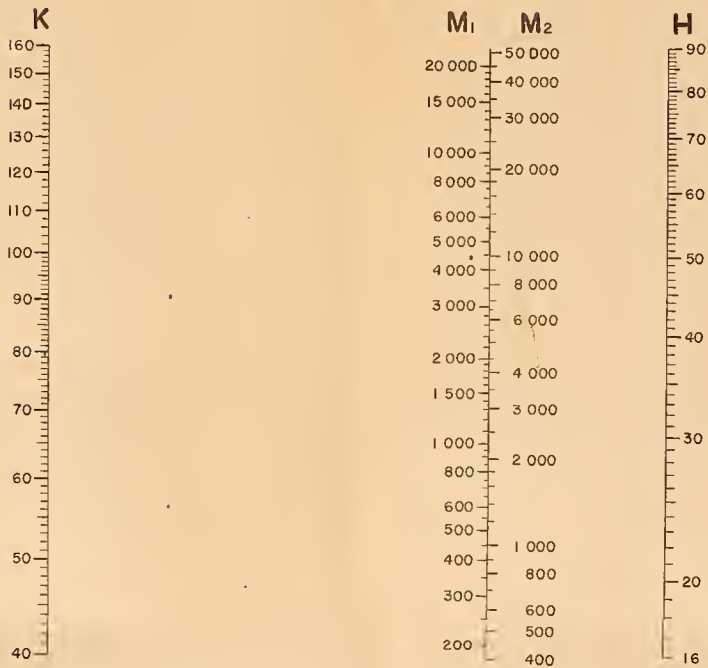


CONNECT V AND W WITH STRAIGHT EDGE AND READ T

[See note on opposite side.]



BENDING MOMENT DUE TO WIND PRESSURE ON POLE



K = $2T + G$ WHERE T = CIRCUMFERENCE AT POLE TOP, IN INCHES
 AND G = CIRCUMFERENCE AT GROUND LINE, IN INCHES.

H = HEIGHT OF POLE ABOVE GROUND LINE, IN FEET.

M₁ = MOMENT AT GROUND LINE FOR HEAVY AND MEDIUM LOADING, IN POUND- FEET.

M₂ = MOMENT AT GROUND LINE FOR LIGHT LOADING, IN POUND -FEET.

LAY STRAIGHTEDGE ACROSS CHART FROM K TO H AND READ BENDING MOMENT AT M₁ OR M₂

Chart 2A.—*Bending moment due to wind pressure on pole*
 (Enlarged from fig. 19 of Discussion Handbook H39, NESC, part 2)

ULTIMATE RESISTING MOMENTS OF WOOD POLES

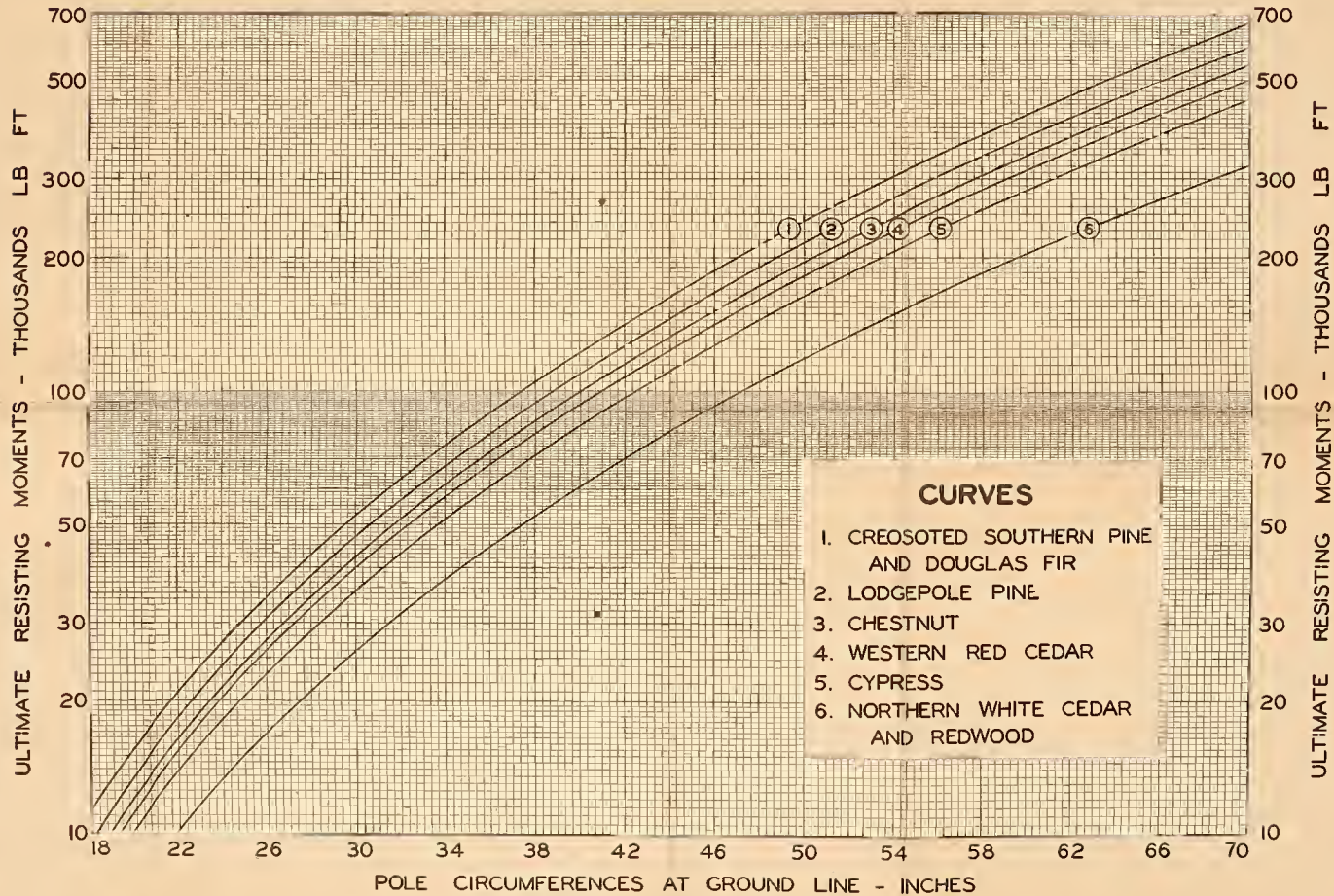


Chart 2B.—Ultimate resisting moments of wood poles
(Enlarged from fig. 20 of Discussion Handbook H39, NESC, part 2)

CATENARY CURVE

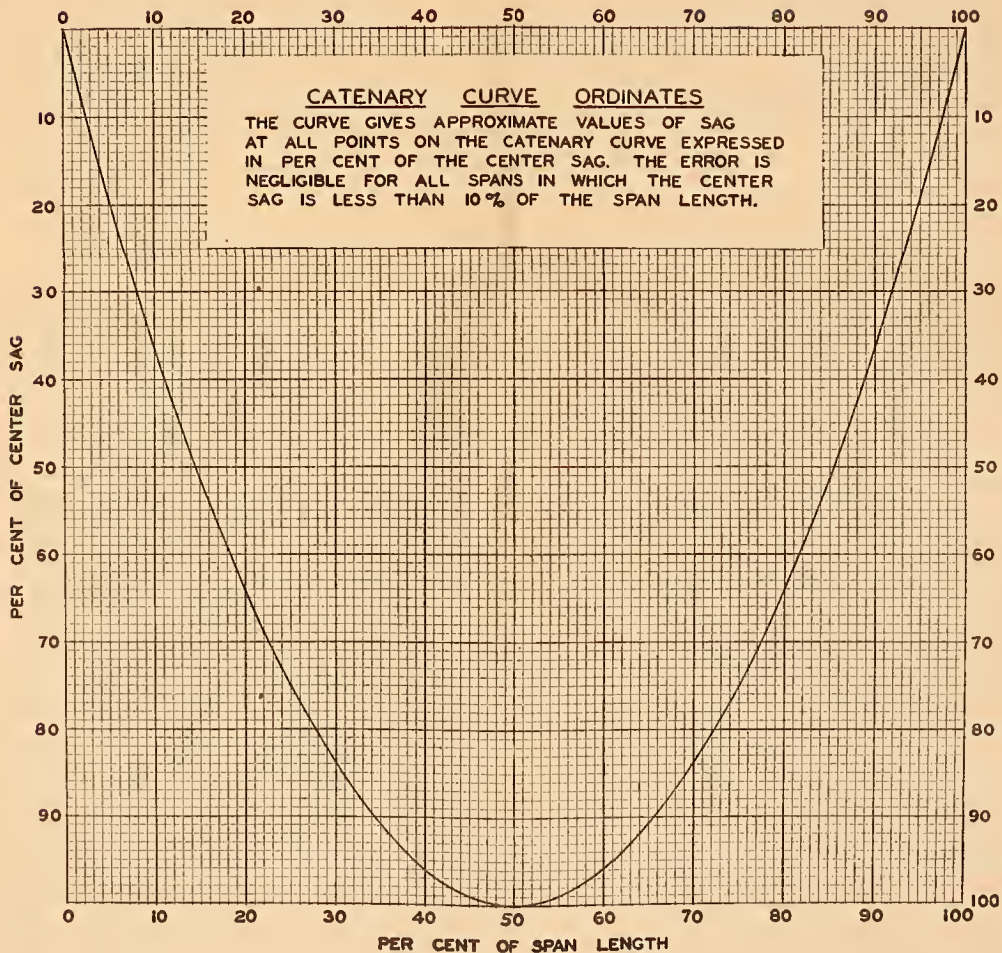


Chart 3.—Catenary curve
(Enlarged from fig. 18 of Discussion Handbook H39, NFSC, part 2)

GUIDE - CHART FOR CARBON - BRUSH TERMINALS (ELECTRIC) ALL DIMENSIONS IN INCHES

INTEGRAL HORSEPOWER OR INDUSTRIAL BRUSH SHUNT TERMINALS															
GENERAL PURPOSE						HEAVY CURRENT									
FLAG TYPE				STRAIGHT COLLAR				CUT TYPE				PRESSED TUBE TYPE			
NO.	A	B	C	NO.	A	B	C	NO.	A	B	C	NO.	A	B	C
1.1	5/32	3/8	7/16	2.1	5/32	3/8	5/8	3.1	7/32	9/16	1/8	4.1	9/32	9/16	1
1.2	7/32	3/8	7/16	2.2	7/32	1/2	13/16	3.2	9/32	9/16	1/8	4.2	11/32	5/8	1
1.3	7/32	1/2	1/2	2.3	9/32	9/16	15/16	3.3	11/32	11/16	1/8	4.3	13/32	3/4	1
1.4	9/32	5/8	13/16					3.4	13/32	13/16	1/8				
OPTIONAL HOLE OR SLOT				OPTIONAL HOLE OR SLOT				SLOT ONLY				OPTIONAL HOLE OR SLOT			

FRACTIONAL HORSEPOWER BRUSH SHUNT TERMINALS											
FLAG TYPE						STRAIGHT COLLAR					
NO.	A	B	C	NO.	A	B	C	NO.	A	B	C
5.1	1/8	1/4	1/4	6.1	1/8	1/4	1/2	6.1	1/8	1/4	1/2
5.2	5/32	9/32	5/16	6.2	5/32	9/32	1/2	6.2	5/32	9/32	1/2
OPTIONAL HOLE OR SLOT						OPTIONAL HOLE OR SLOT					

TOLERANCES: FOR SHUNT TERMINALS LENGTH AND WIDTH PLUS OR MINUS 1/32 HOLE OR SLOT - PLUS 0.000 MINUS 0.010
--

FRACTIONAL HORSEPOWER BRUSH TERMINALS - CARTRIDGE TYPE HOLDERS																										
STAMPED ROUND DISCS			ROUND CAPS			TURNED BRASS ROUND BUTTONS																				
NO EARS		FLAT EARS	STAMPED BENT EARS			WITH NECK			WITH NECK & NIPPLE																	
NO.	A	B	C	NO.	A'	A^2	B	C	NO.	A	B'	B^2	C	D	NO.	A'	A^2	B'	B^2	NO.	A'	A^2	A^3	B'	B^2	B^3
7.1	3/16	1/8	1/16	8.1	5/16	7/32	5/32	3/64	9.1	1/4	3/16	7/32	.175	3/16	10.1	7/32	5/32	3/32	3/64	11.1	5/16	7/32	3/32	3/16	3/64	3/32
7.2	1/4	3/16	1/16	8.2	3/8	9/32	5/32	3/64	9.2	1/4	3/16	7/32	.085	3/16	10.2	1/4	3/16	3/32	3/64	11.2	11/32	1/4	3/32	3/16	3/64	3/32
7.3	5/16	7/32	1/16	8.3	7/16	5/16	7/32	19/32	9.3	5/16	3/16	9/32	.175	1/4	10.3	9/32	7/32	1/8	1/16	11.3	3/8	9/32	3/32	3/16	3/64	3/32
7.4	3/8	9/32	1/16	8.4	5/8	1/2	9/32	13/16	9.4	5/16	3/16	9/32	.085	1/4	10.4	11/32	9/32	1/8	1/16							
7.5	7/16	5/16	3/32						9.5	3/8	3/16	9/32	.175	1/4	10.5	1/2	11/32	1/8	1/16							
7.6	9/16	7/16	1/8						9.6	3/8	3/16	9/32	.085	1/4	10.6	9/16	13/32	1/8	1/16							
7.7	3/4	1/2	1/8						9.7	1/2	11/32	7/16	.240	5/16												
									9.8	9/16	11/32	7/16	.240	5/16												
									9.9	11/16	7/16	1/2	.350	5/16												
									9.10	1/8	13/16	31/32	.350	7/16												

TOLERANCES: FOR DISCS, CAPS AND BUTTONS ALL DIMENSIONS PLUS 0.000 MINUS 0.008

Enlargement of chart printed in Simplified Practice Recommendation R210 45, Carbon Brush Terminals (Electric), Effective July 15, 1945, and available also from the Superintendent of Documents at 5 cents a copy.





