

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RELEASED

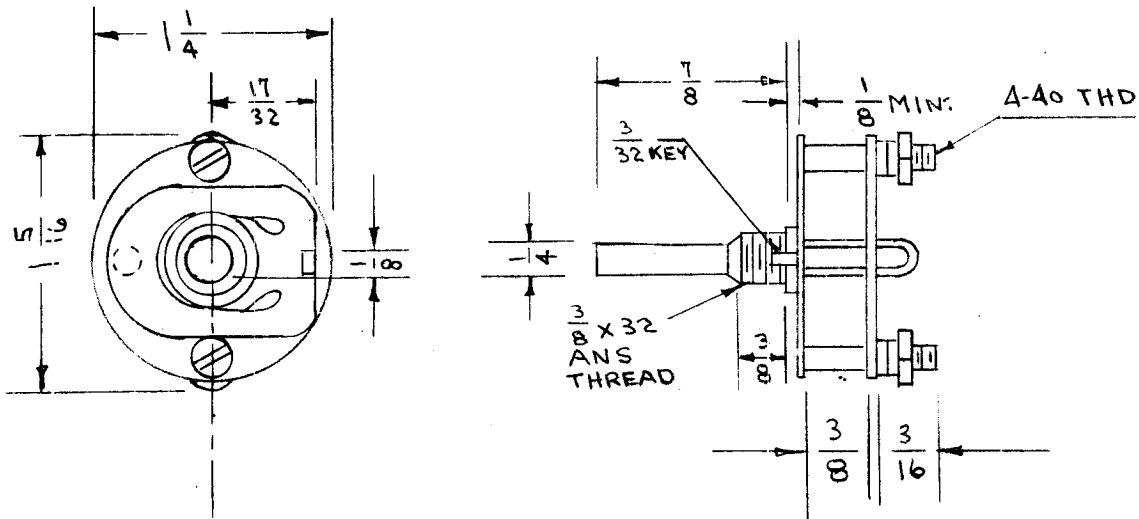
SW-105

A

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

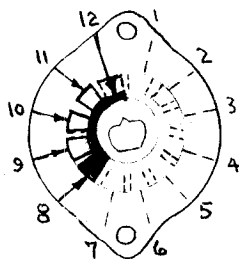
USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
LFA	143	A-182	9-25-54
RSF-2			5-12-55
VOX-1, 2			5-12-55



NO. OF SECTIONS 1
 NO. OF POSITIONS 4
 ANGLE OF THROW 30°
 SHAFT- ROUND
 NON SHORTING CONTACTS.
 INSULATION - MYCALEX 1/8" #410
 CONTACT & ROTOR - SILVER PLATED
 BRASS

MUST PASS 50 HR. SALT SPRAY TEST
 STAMP SW-105 ON FRONT PLATE
 METAL PARTS EXCEPT TERMINALS &
 CONTACTS SHALL BE CADMIUM PLATED
 AND CHROMATE DIPPED.



VIEWED FROM FRONT
 (KNOB END) OF SWITCH IN EXTREME COUNTER-
 CLOCKWISE POSITION

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
			SWITCH, ROTARY	
			C.D.D. 9-25-54	A. J. J.
			DRAWN	ELEC. DES. APP.
			CHECKED	FINAL APPROVAL
				SW-105
				A

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
		USED ON RSF-2-VOX-1,2 AND 5-12-55	1	P.B.	COS	WOL	

TOLERANCES	SCALE	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.
ALL OTHERS DEC. DIM. ± FRAC. DIM. ± 1/64 ANGULAR DIM. ±	S-401-13 (F)	

OAK "TYPE F" SWITCH

SW-107

4-40 THREAD

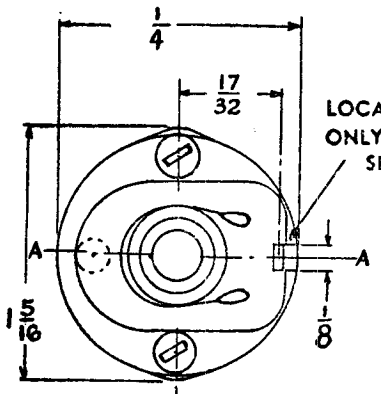
CUSTOMER'S SW-107
PART NO.

THE TECHNICAL MATERIAL CORPORATION

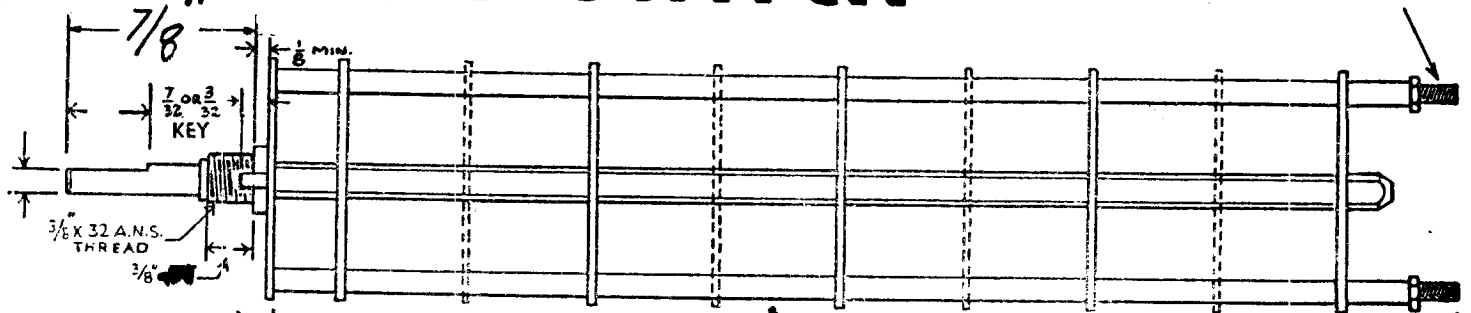
121 SPENCER PLACE
MAMARONECK, N. Y.

CUSTOMER

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.



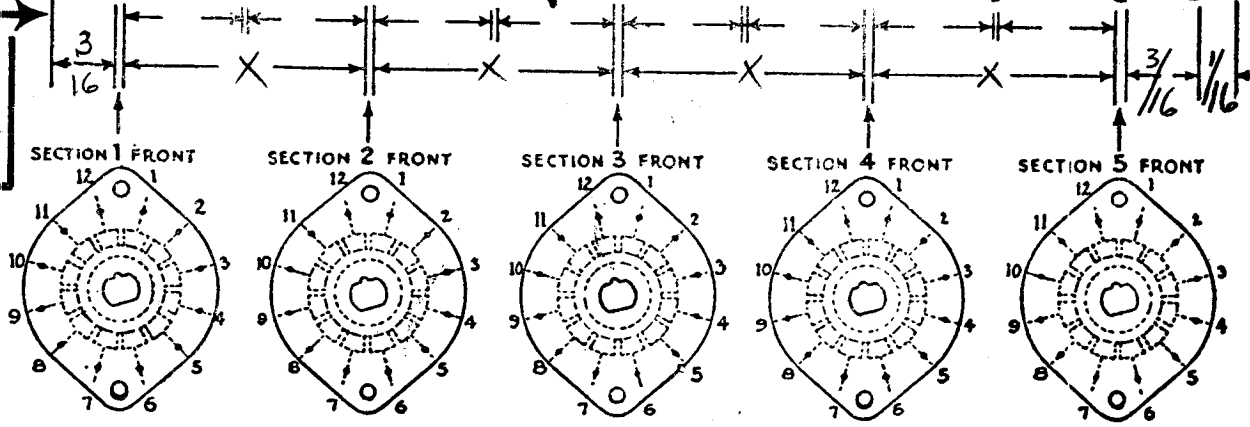
LOCATING KEY ONLY AT POINT SHOWN



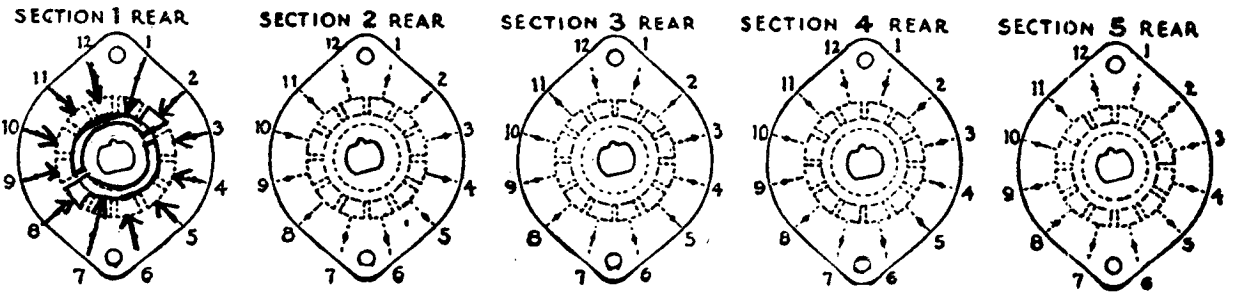
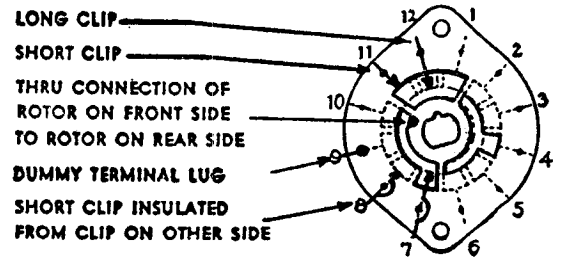
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 1
NUMBER OF POSITIONS 5
ANGLE OF THROW 30 (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ARMY NAVY SALT TEST (IF ANY GIVE DETAILS) 200 HR
 CONTACTS AND ROTORS: SILVER PLATED BRASS SOLID SILVER ALLOY IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2" ACROSS FLATS; MATERIAL BR PLATING NP
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL BR PLATING NP
 STAMP PART NUMBER SW 107-B ON FRONT PLATE, YES N

CUSTOMER NOTES

S107

VOX

REV	CHG	DATE	CH LB	CHK	APP
A	3/16 DIA WAS 11/32	10/6/46	11321		
B	1/2" WAS 5/16	3/6/47	17887		

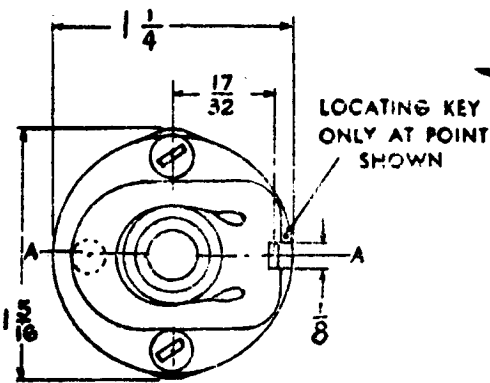
SW-107-B

USED ON A-590

SUPERCEDED

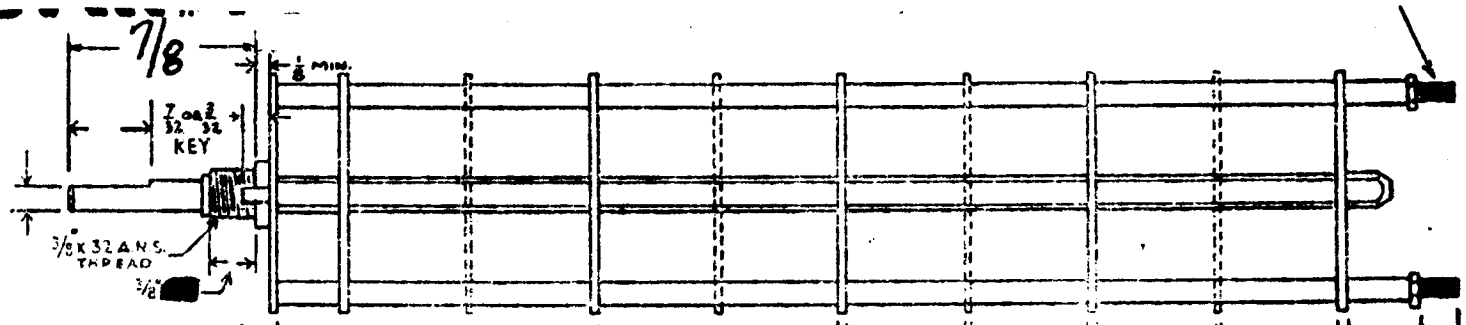
RES029

DATE 9/7/57



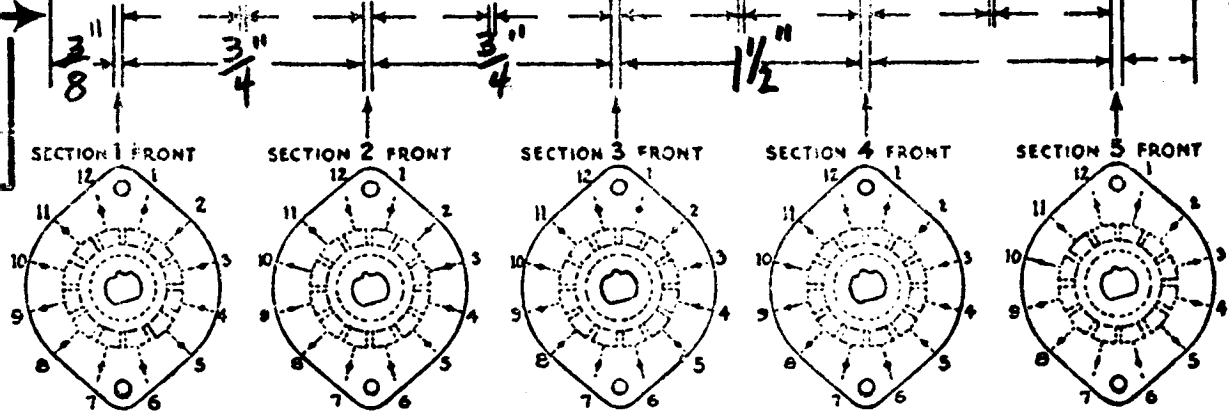
LOCATING KEY
ONLY AT POINT
SHOWN

SHOW CUT AWAY PORTION
OF FLAT IN BLACK AND GIVE
ANGLE TO LINE A-A. $\pm 3^\circ$
STANDARD RMA KNURLED AND
SLOTTED SHAFT ALSO AVAILABLE

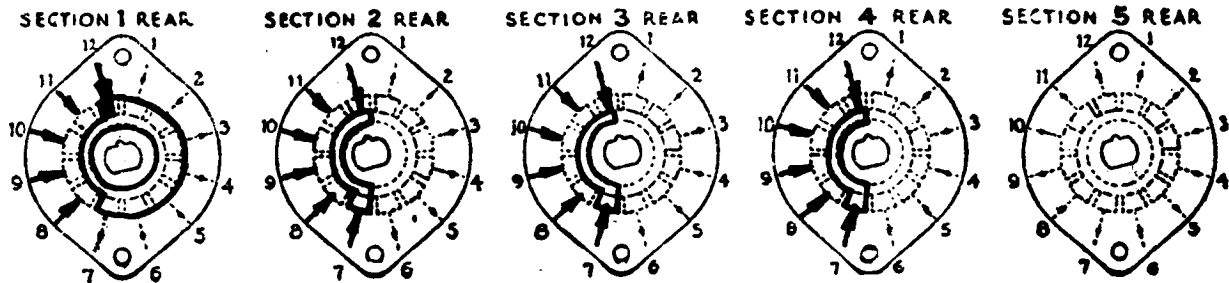
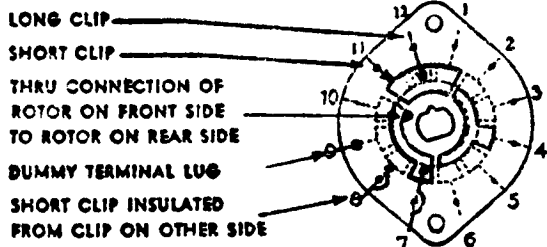


FRONT AND REAR
OF SECTIONS VIEWED
FROM FRONT OR
KNOB END OF SWITCH
IN EXTREME COUNTER-
CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{4}{5}$
NUMBER OF POSITIONS $\frac{5}{5}$
ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH
SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

S202 VOX

SPECIFICATIONS

SHORTIN TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
INSULATION: $\frac{1}{2}$ BAKELITE $\frac{1}{2}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED

FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 HR

CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.

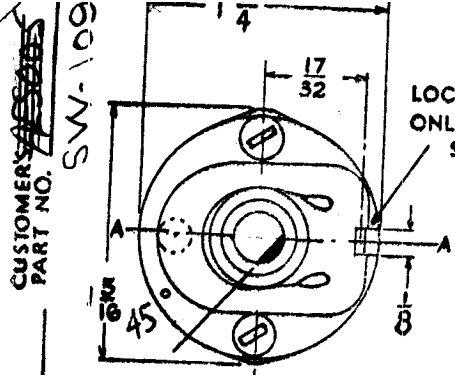
MOUNTIN HARDWARE: SUPPLY 1 $\frac{3}{8}$ " .32 NUTS $\frac{5}{16}$ " ACROSS FLATS; MATERIAL BR PLATING N.P.
1 $\frac{1}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL BR PLATING UP

STAMP PART NUMBER SW-108 (NUMBER) ON FRONT PLATE, YES NO

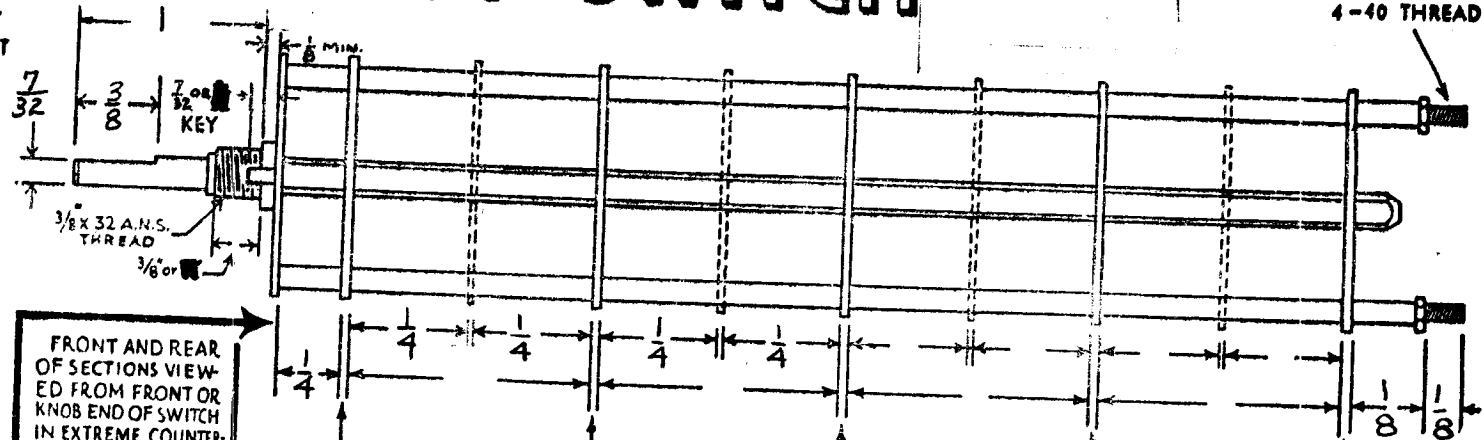
CUSTOMER NOTES
SECTION #1 - SHORTING, PHENOLIC-OAK 51198-F
SECTION #2 - NON SHORTING, PHENOLIC-
SECTION #3 - " " MYCALEX-
SECTION #4 - " " " -OAK 51197-FX

OAK TYPE F SWITCH

MODEL XFK SW-109
4-40 THREAD



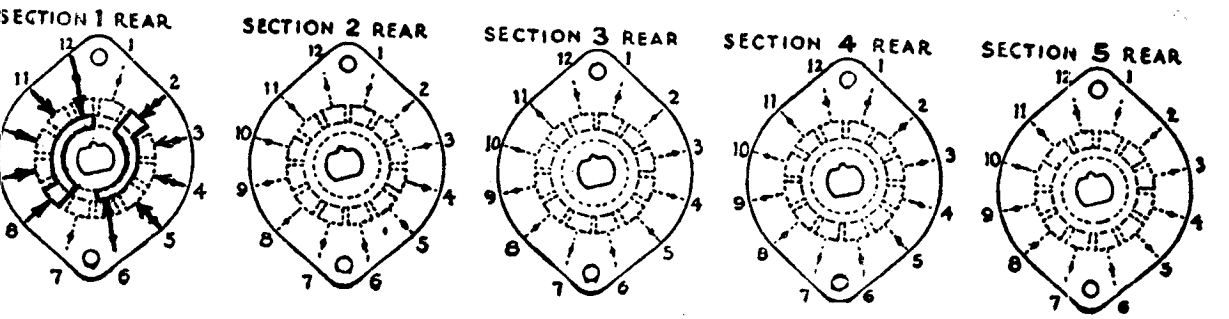
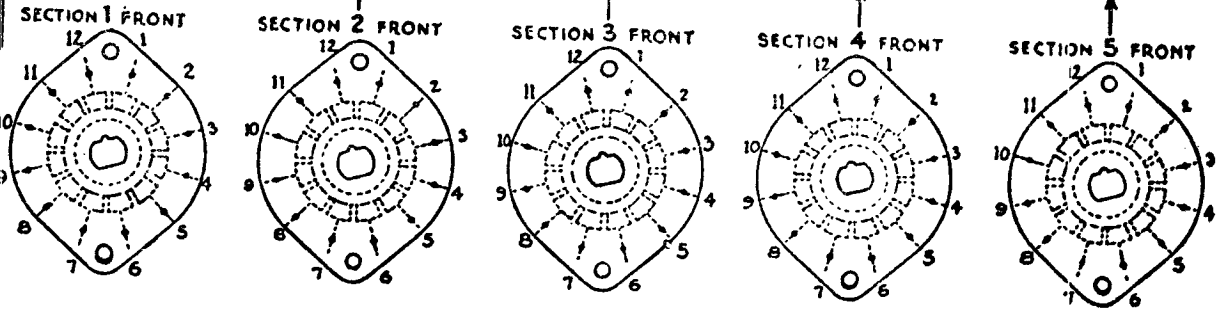
LOCATING KEY ONLY AT POINT SHOWN



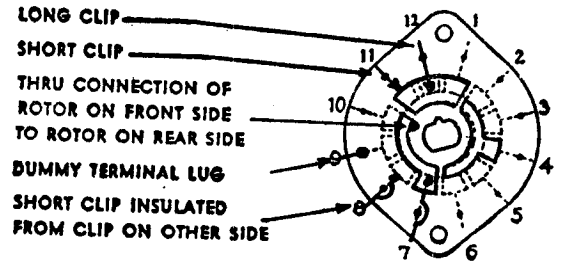
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 3
NUMBER OF POSITIONS 4
ANGLE OF THROW 30 (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 HR
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTAIN HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS $\frac{1}{2}$ " ACROSS FLATS; MATERIAL _____ PLATING _____
 STAMP PART NUMBER SW-109 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____
 (NUMBER) ON FRONT PLATE, YES N

CUSTOMER NOTES

- ① Sections 1, 2, and 3 identical switching
- ② Sections 1 and 2 bakelite
- ③ Section 3 mycalex

USED ON Model XFK A-601

SW-109

XFK SI

SUPERCEDES DATE 3/5/57
AES005

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.
47568-FXB

CUSTOMER THE TECHNICAL MATERIEL CORPORATION MAMARONECK, N. Y.

CUSTOMER PART NO. SW-109

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

47592-F1

CUSTOMER

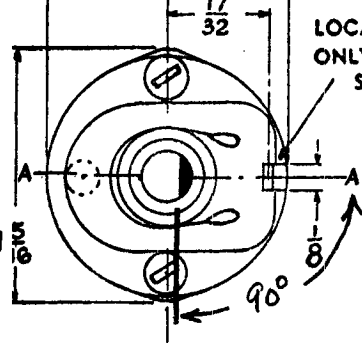
THE TECHNICAL MATERIAL CORPORATION
MAMARONECK, N. Y.

CUSTOMER'S PART NO.

SW-111-C

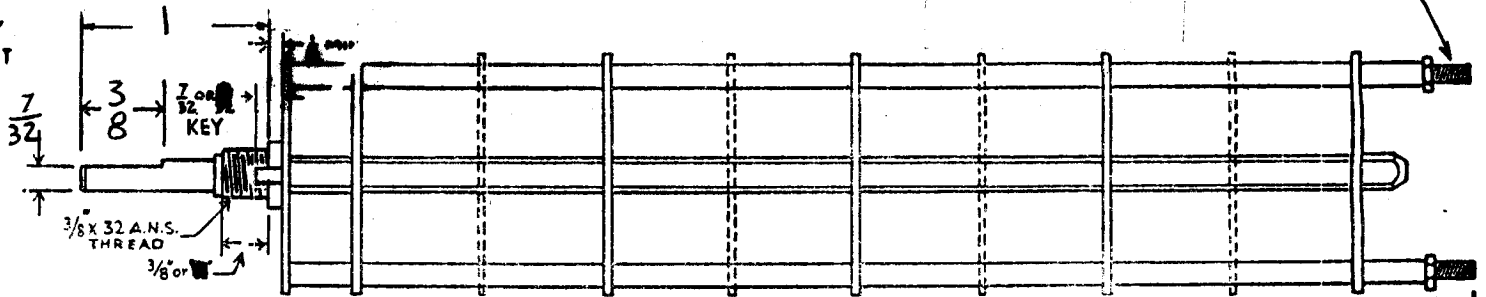
OAK TYPE F SWITCH

SW-111-D
4-40 THREAD



LOCATING KEY ONLY AT POINT SHOWN

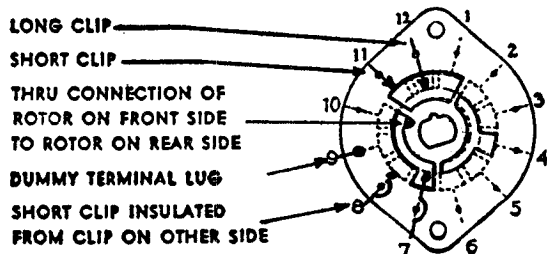
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$
STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE



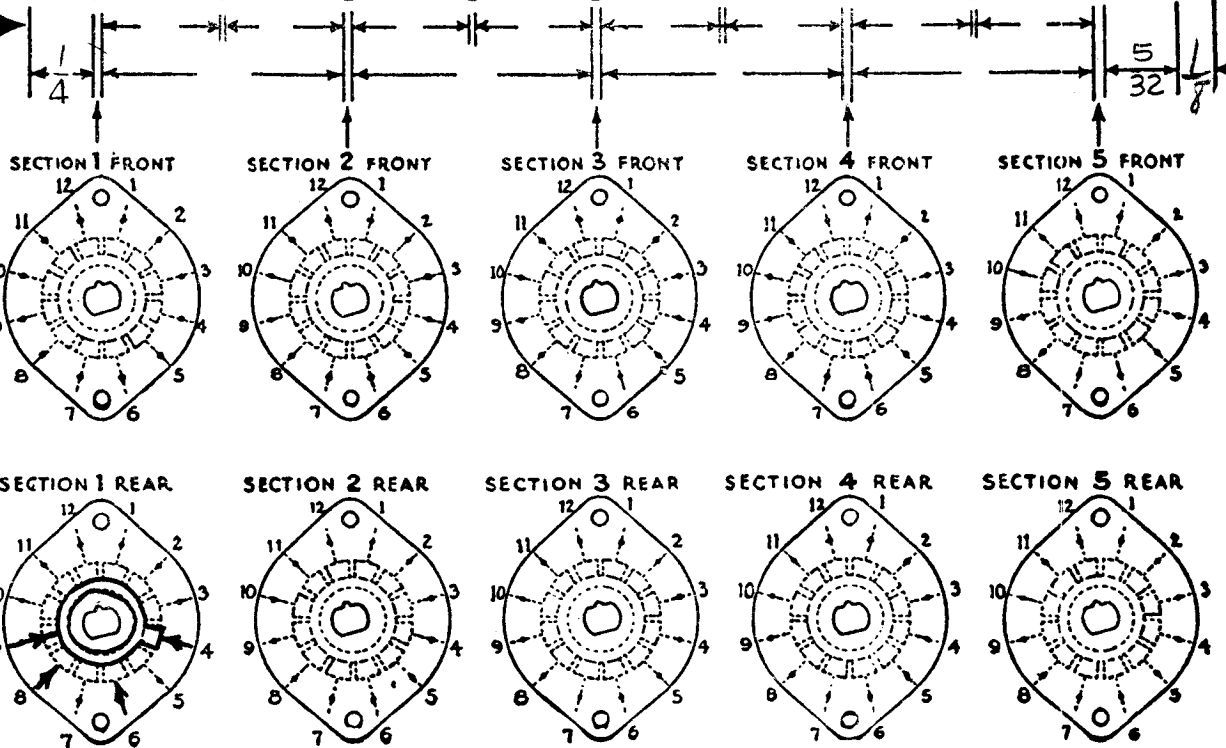
FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{3}$
NUMBER OF POSITIONS $\frac{3}{3}$
ANGLE OF THROW 60° (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.

INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.

FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 HR SALT SPRAY

CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.

MOUNTING HARDWARE: SUPPLY $\frac{1}{2}$ 3/8" - 32 NUTS $\frac{1}{2}$ ACROSS FLATS; MATERIAL _____ PLATING _____

$\frac{1}{2}$ 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____

STAMP PART NUMBER SW-111- (NUMBER) * ON FRONT PLATE, YES NO

FORM 5-1

(* LATEST DWG. REV. LETTER)

(XFK)

CUSTOMER NOTES					
D	1/4 DIM WAS 3/16	2.8.57	18274	LWH	
C	* ADDED LATEST REV. LETTER	2.8.57	10806A-M	TR	WJG
B	REVISIONS	10.28.54	G.D.	WJG	WJG
A	ON SWITCH 5/32 DIM. WAS 1/8	3/11/61	6492	WJG	WJG
SYM.	CHANGE	DATE	CH. NO.	DEPT.	CHECK

SW-111-D

8101-160

SUPERCEDES \rightarrow 3/5/57
AES007 DATE

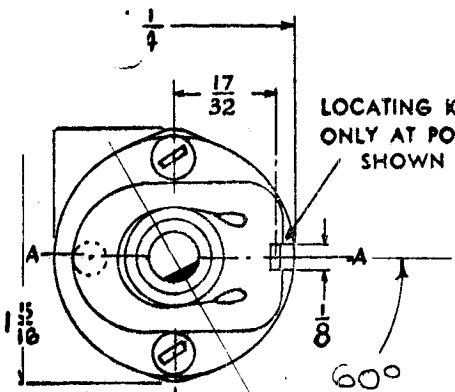
CUSTOMER'S PART NO.

CUSTOMER

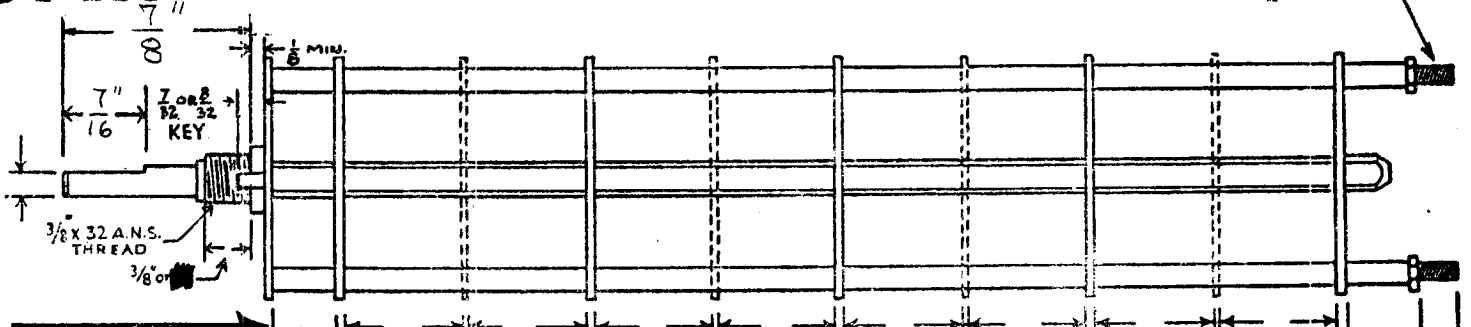
OAK MANUFACTURING CO.
1260 CLYBORN AVE, CHICAGO 10, ILL.

OAK TYPE F SWITCH

SW-112
4-40 THREAD

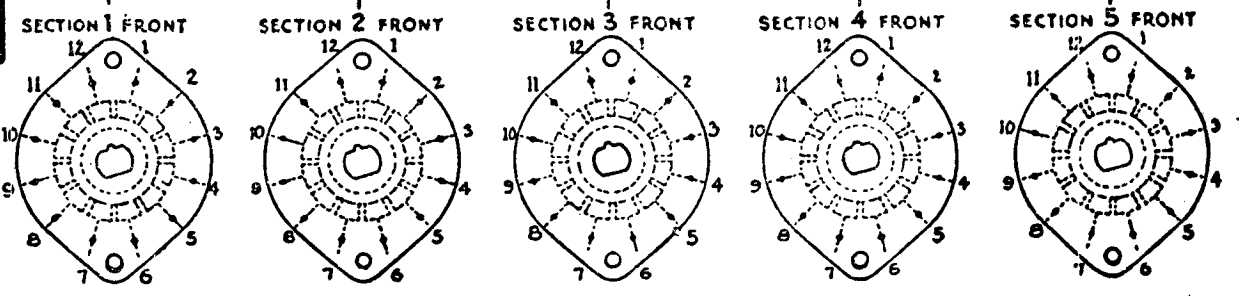


SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. ± 3°
STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

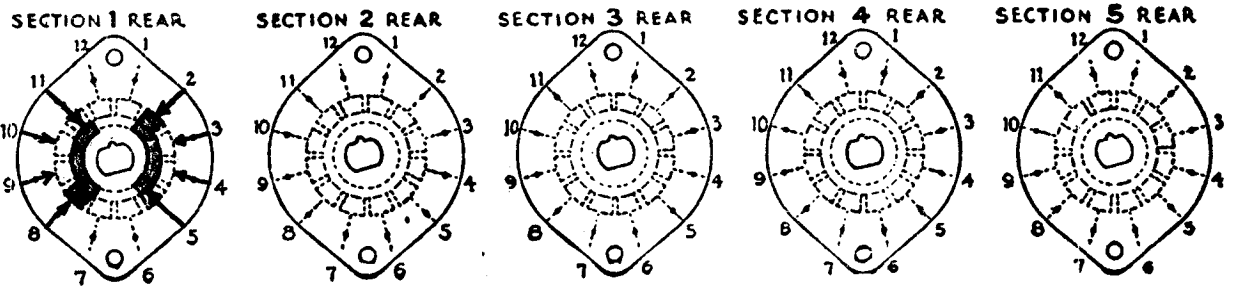
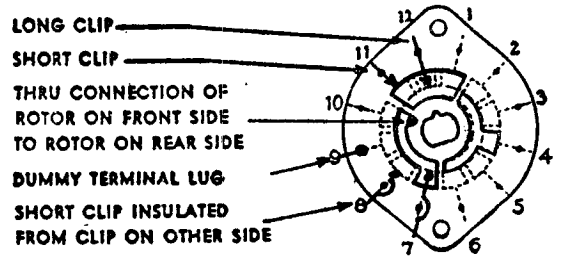


FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{3}$
NUMBER OF POSITIONS $\frac{3}{3}$
ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



CUSTOMER NOTES

OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 hr salt spray
 CONTACTS AND ROTORS: SILVER PLATED BRASS SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2" ACROSS FLATS; MATERIAL _____ PLATING _____
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____
 STAMP PART NUMBER SW-112 ON FRONT PLATE, YES NO

Order #2842-F1

DCW

SW-112

supercedes AES010

DATE 5/8/57

2-12-53

FORM 5-1 | C | 1/A DIM WAS 3/16 | 6.19.67 | 182.74 | WTW | *My OP* | (CFA) | *110*

CUSTOMER'S PART NO. SW-115

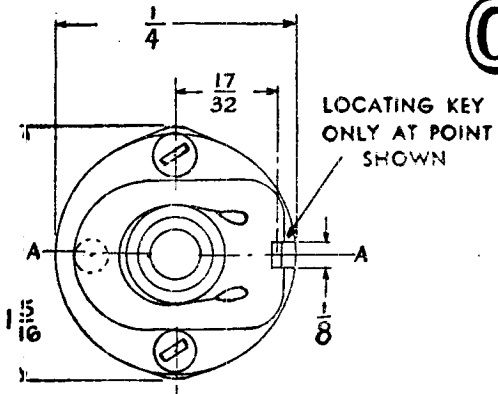
CUSTOMER

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

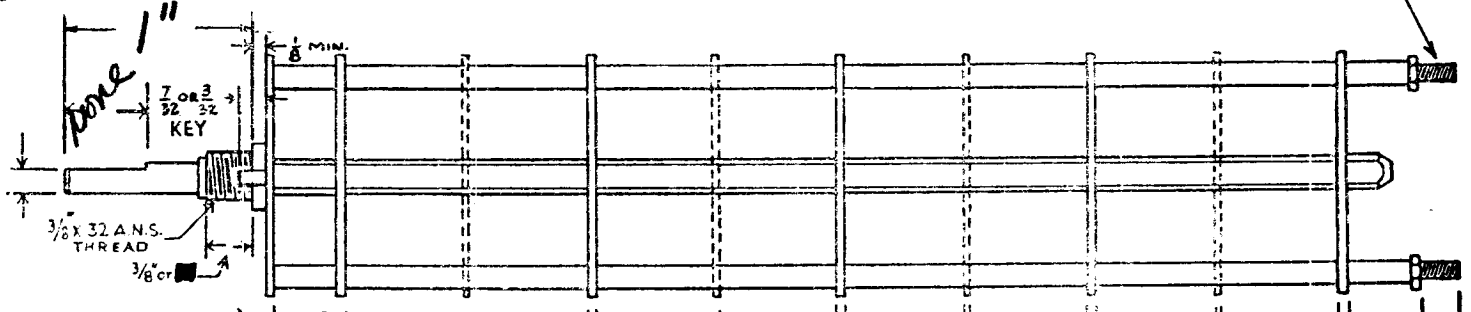
OAK TYPE F SWITCH

SW-115

4-40 THREAD



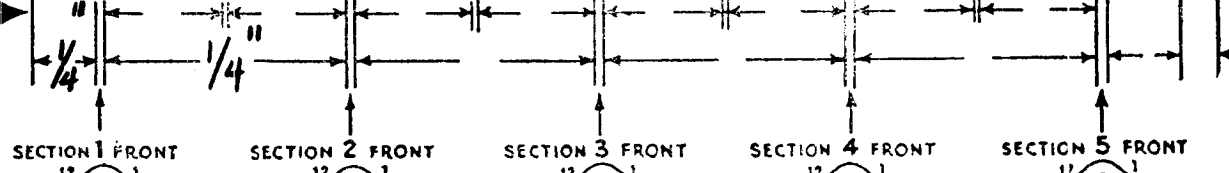
LOCATING KEY ONLY AT POINT SHOWN



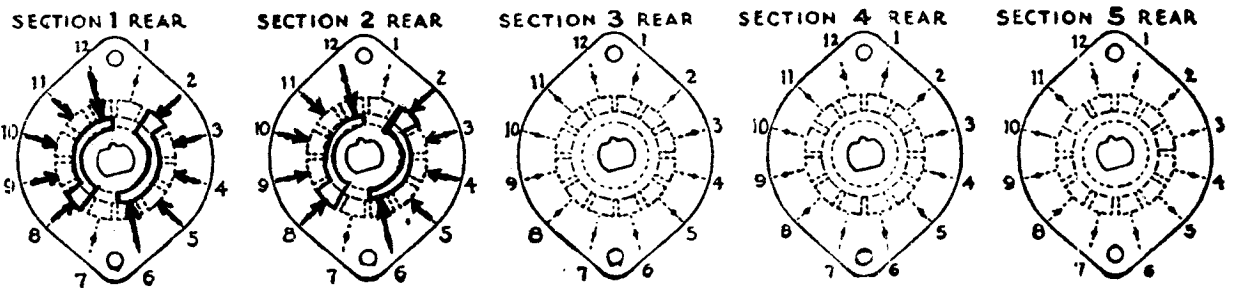
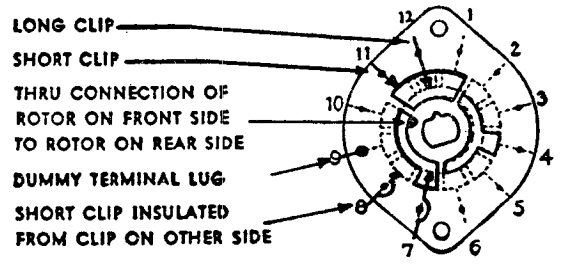
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{2}{4}$
 NUMBER OF POSITIONS $\frac{4}{4}$
 ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

CUSTOMER NOTES

52, DVM

Superceded AEC 510
2-12-53

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200hr
 CONTACTS AND ROTORS: SILVER PLATED BRASS SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " .32 NUTS 1/2" ACROSS FLATS; MATERIAL BR PLATING N.P.
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL P.B PLATING N.P.
 STAMP PART NUMBER SW-115 ON FRONT PLATE, YES NO

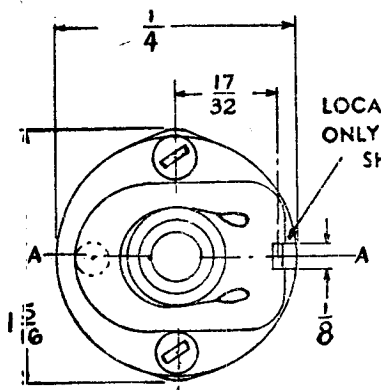
SW-115
DATE 7/5/57

CUSTOMER: **Technical Materiel Co** CUSTOMER'S PART NO. **SW-116**
OAK MANUFACTURING CO. 1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE F SWITCH

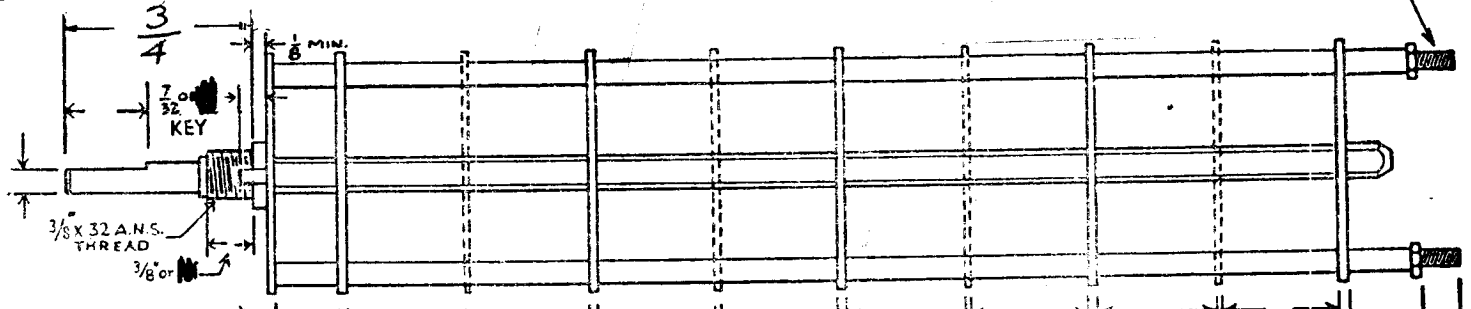
XFK

4-40 THREAD



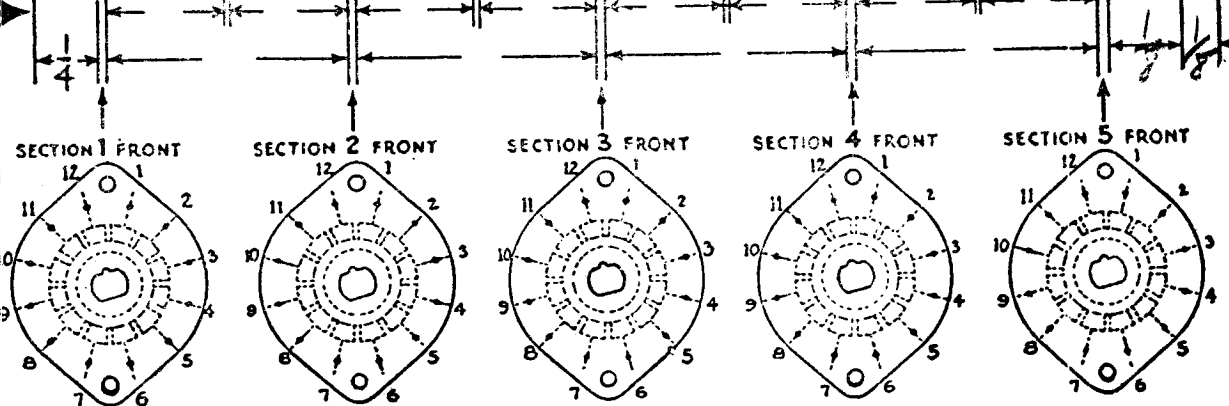
LOCATING KEY ONLY AT POINT SHOWN

SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

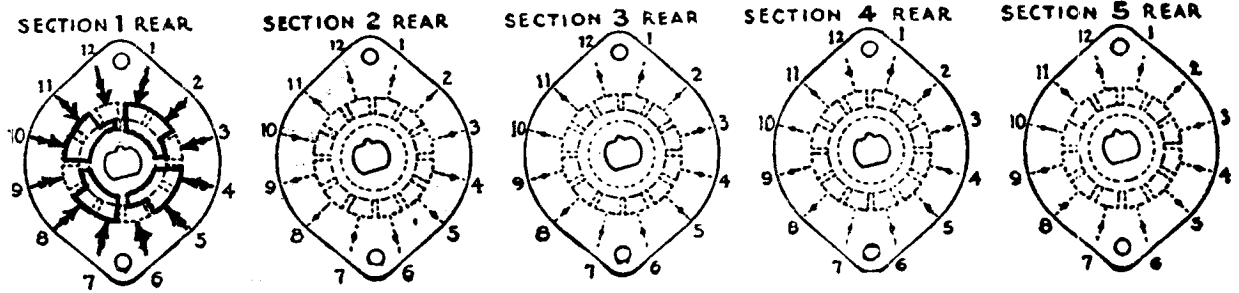
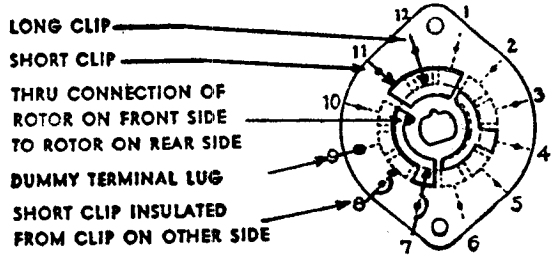


FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{2}$
 NUMBER OF POSITIONS $\frac{2}{2}$
 ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

USED ON
 Model XFK
 A-643

4P/2005

CUSTOMER NOTES

48866-FIX

SW-116

S9
 SUPERCEDED
 AES021

DATE 7/13/57

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 Hour
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTIN HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/4" ACROSS FLATS; MATERIAL _____ PLATING _____
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____
 STAMP PART NUMBER SW-116 ON FRONT PLATE, YES NO
 (NUMBER)

CUSTOMER'S PART NO. SW-117

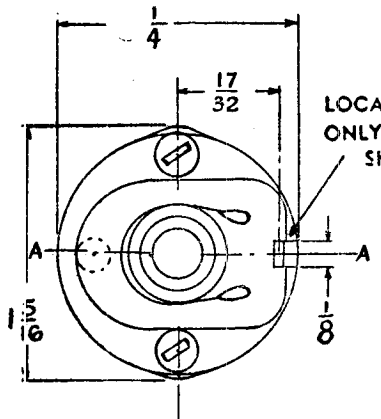
CUSTOMER

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE F SWITCH

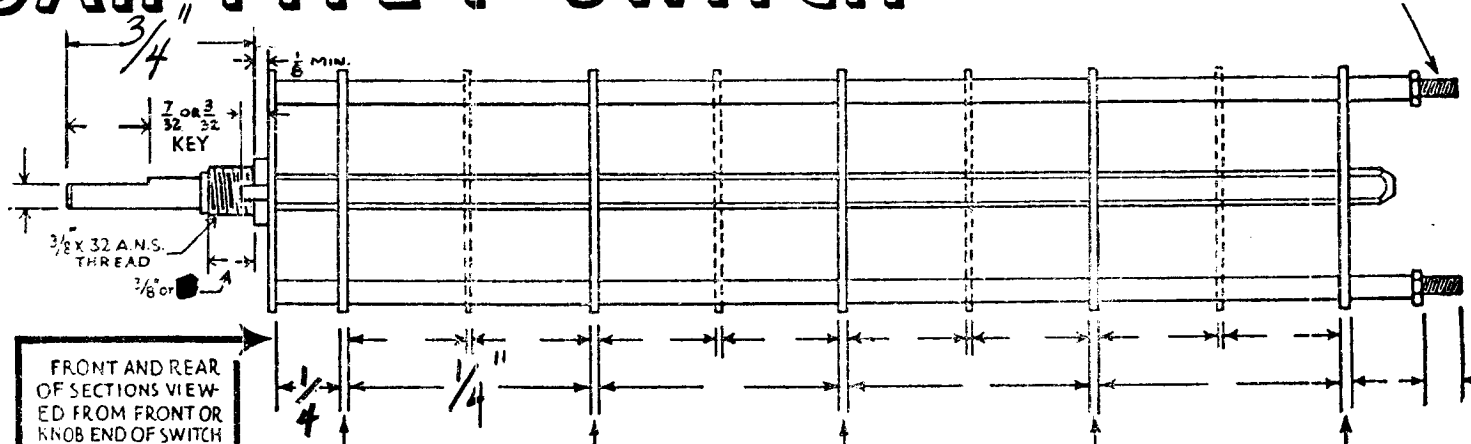
SW-117

4-40 THREAD



LOCATING KEY ONLY AT POINT SHOWN

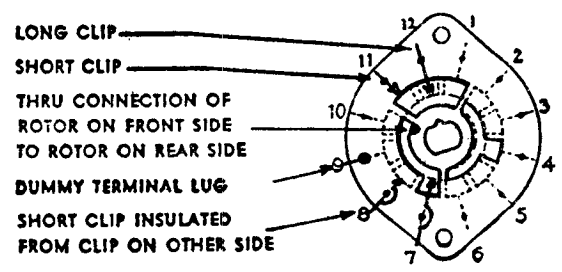
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$
STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE



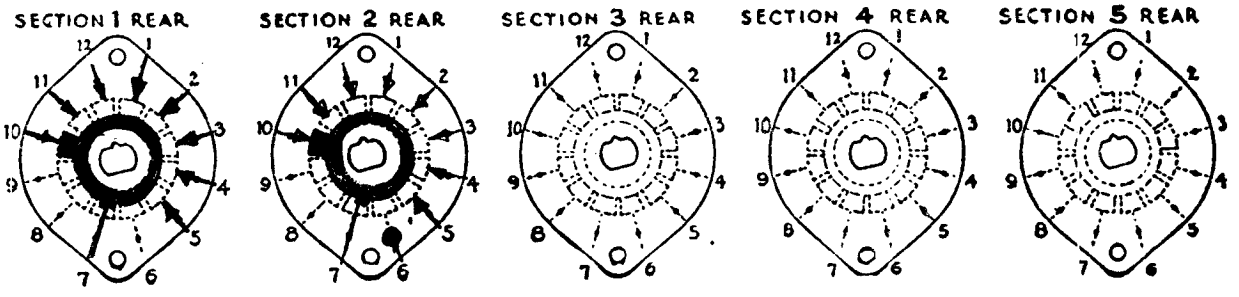
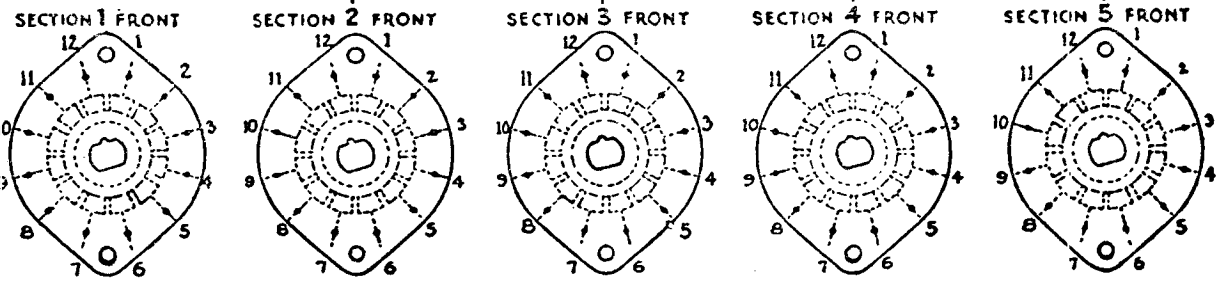
FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{2}{8}$
NUMBER OF POSITIONS $\frac{2}{8}$
ANGLE OF THROW 30° (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



CUSTOMER NOTES

SH, VAK-2

Supersedes AESO?
2-12-53

SW-117

DATE 7/30/51

SPECIFICATIONS

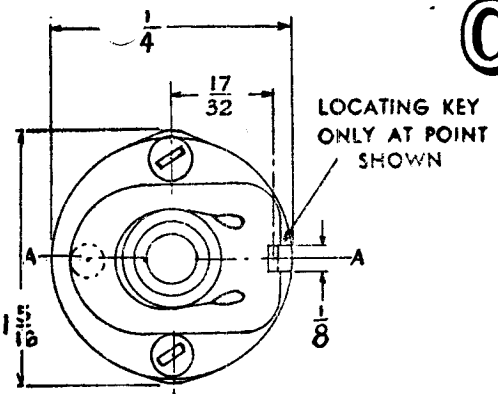
SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200hr
CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2 ACROSS FLATS; MATERIAL BR PLATING N.P.
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL P.B. PLATING N.P.
STAMP PART NUMBER SW-117 ON FRONT PLATE, YES NO
(NUMBER)

CUSTOMER'S SW-118
PART NO.

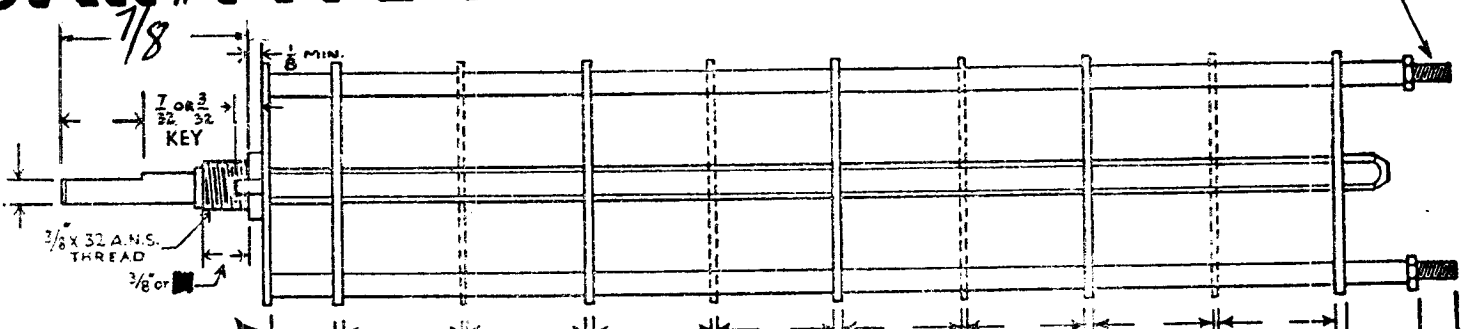
OAK TYPE F SWITCH

SW-118

4-40 THREAD



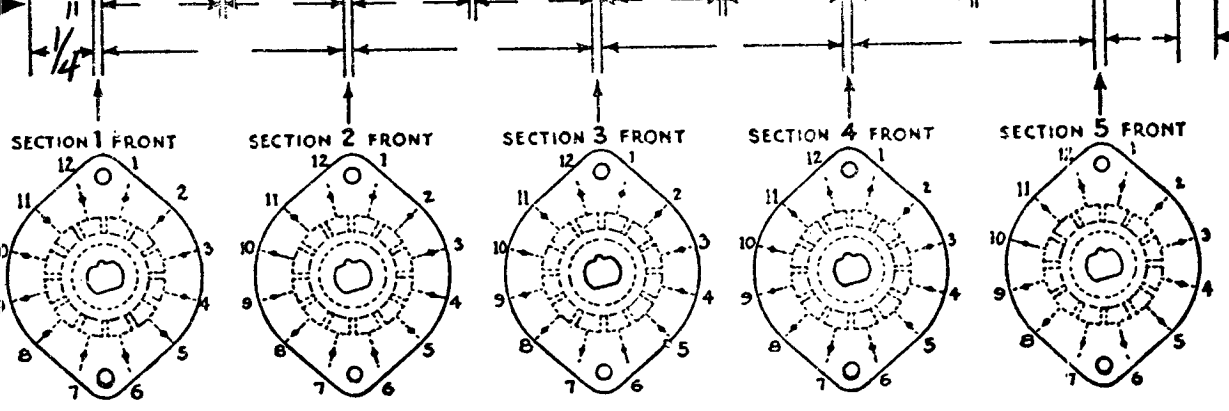
LOCATING KEY ONLY AT POINT SHOWN



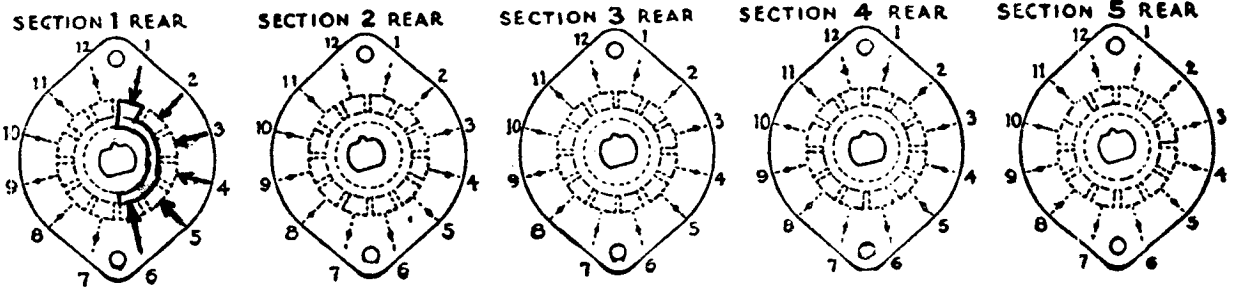
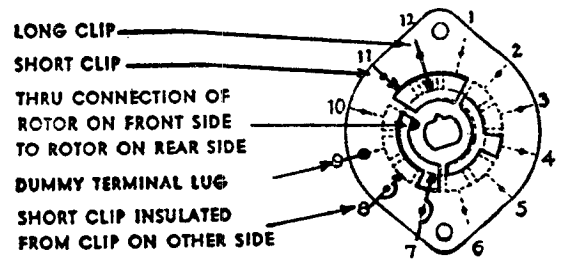
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{5}$
NUMBER OF POSITIONS $\frac{5}{30^\circ}$ (30° OR 60°)
ANGLE OF THROW



SYMBOLS USED IN MARKING PRINT



CUSTOMER NOTES

OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200W
CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2" ACROSS FLATS; MATERIAL BR PLATING N.P.
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL P.B. PLATING N.P.
STAMP PART NUMBER SW-118 (NUMBER) ON FRONT PLATE, YES NO

S6, DCU
1P/5 POS/1SECT

SUPERCEDES AES024
2-12-53

SW-118
DATE 8/1/51

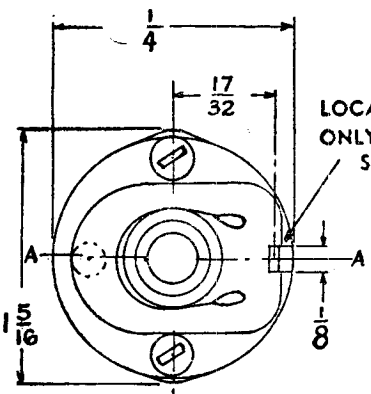
CUSTOMER
OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

CUSTOMER'S SW-120
PART NO.

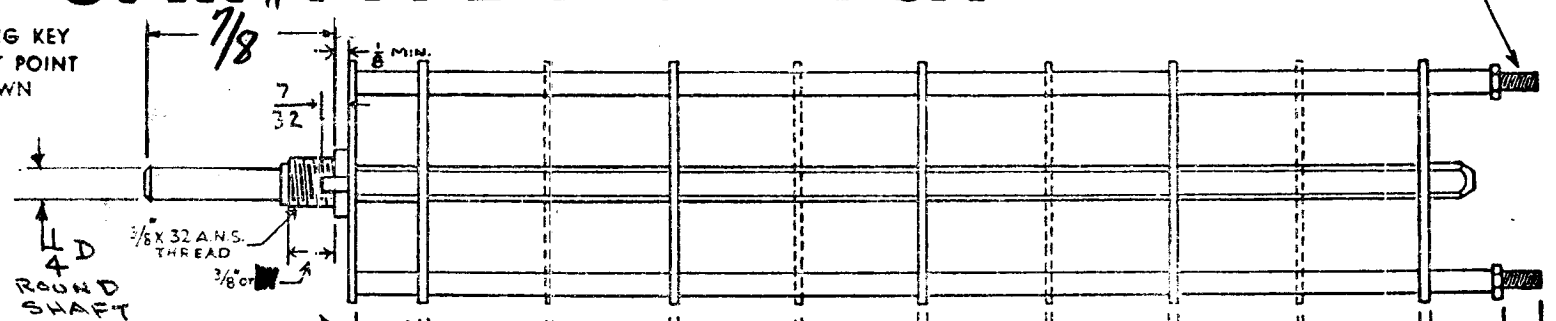
OAK TYPE F SWITCH

SW-120

4-40 THREAD



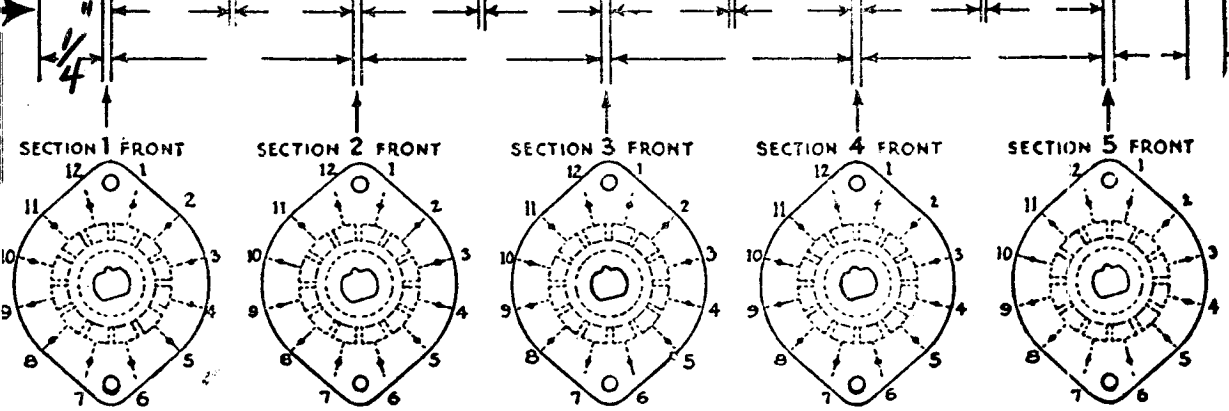
LOCATING KEY ONLY AT POINT SHOWN



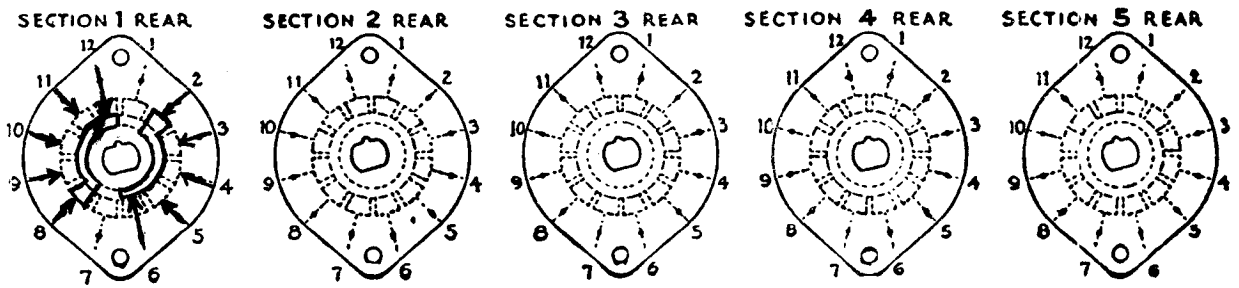
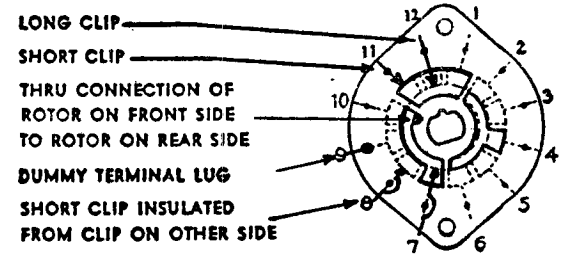
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{4}$
 NUMBER OF POSITIONS $\frac{4}{1}$
 ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



CUSTOMER NOTES

S2 S3, DCU
2P/4POS/1SECT

OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTIN TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200M
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS $\frac{1}{2}$ " ACROSS FLATS; MATERIAL BR PLATING N.P.
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL P.B. PLATING N.P.

Supersedes AFS026
2-12-53

STAMP PART NUMBER SW-120 (NUMBER) ON FRONT PLATE, YES NO

SW-120

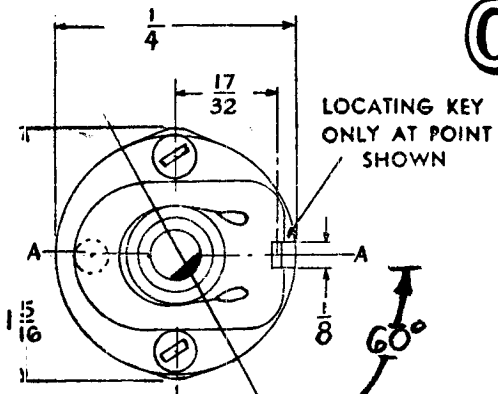
DATE 8/1/51

CUSTOMER
OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK MANUFACTURING CO. 1260 CLYBORN AVE., CHICAGO 10, ILL.
 CUSTOMER THE TECHNICAL MATERIE PART NO. SW-121A CORPORATION

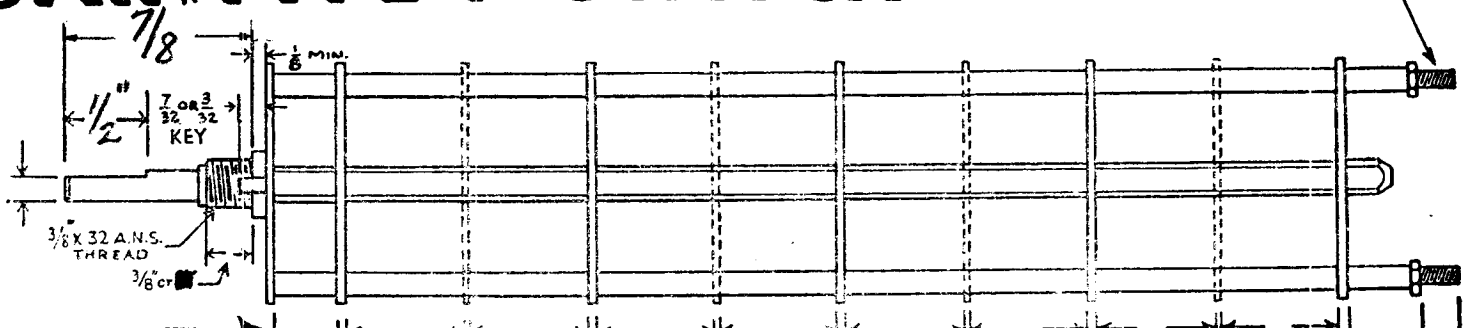
OAK TYPE F SWITCH

SW121A



LOCATING KEY ONLY AT POINT SHOWN

SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A ± 3° STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

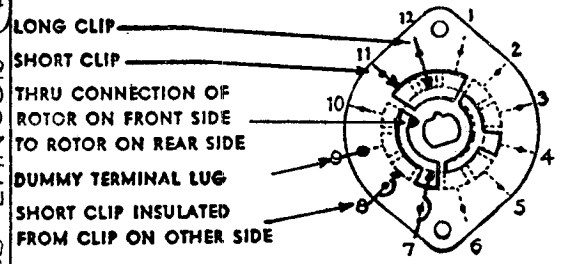


4-40 THREAD

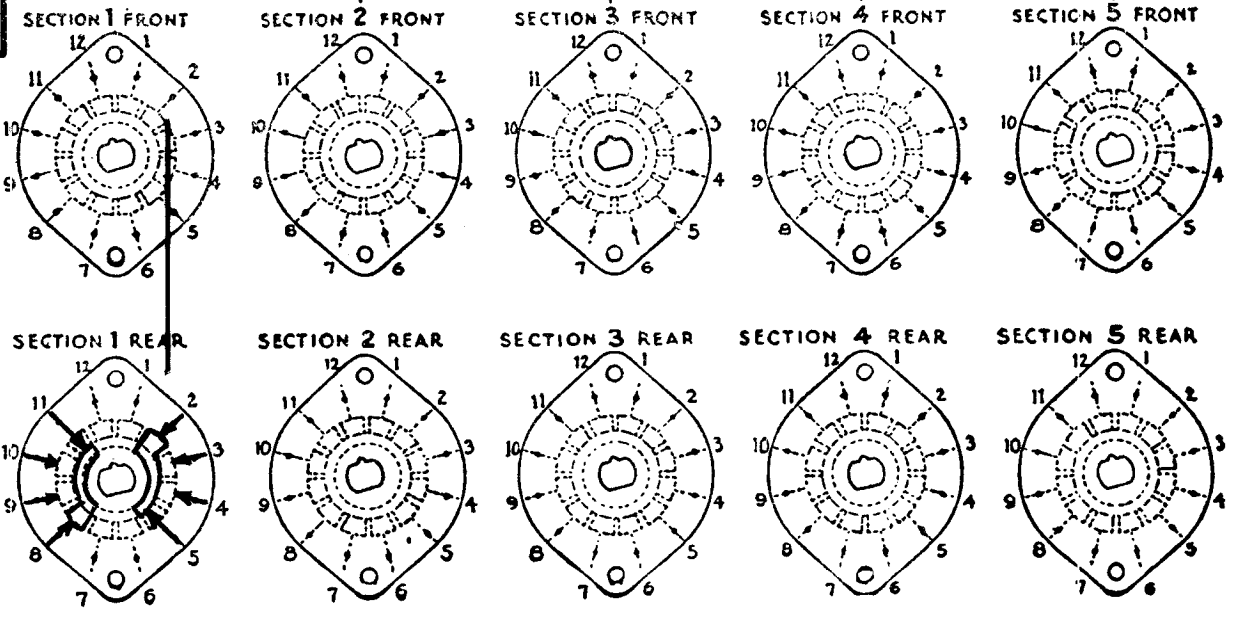
FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{3}$
 NUMBER OF POSITIONS $\frac{1}{3}$
 ANGLE OF THROW 30° (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



REPLACES AES010

CUSTOMER NOTES

SW-121A

REPLACES 2
AES033

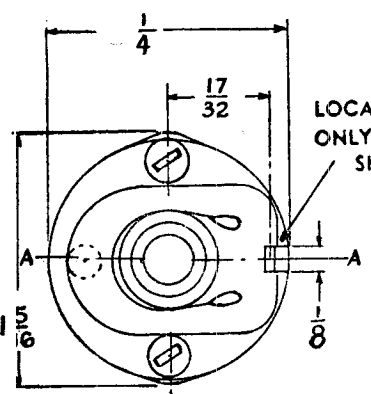
SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 hr salt spray
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " .32 NUTS 1/2" ACROSS FLATS; MATERIAL _____ PLATING _____
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____
 STAMP PART NUMBER SW-121 ON FRONT PLATE, YES NO
 (NUMBER)

108
 A.J.J. DATE 11/2/51

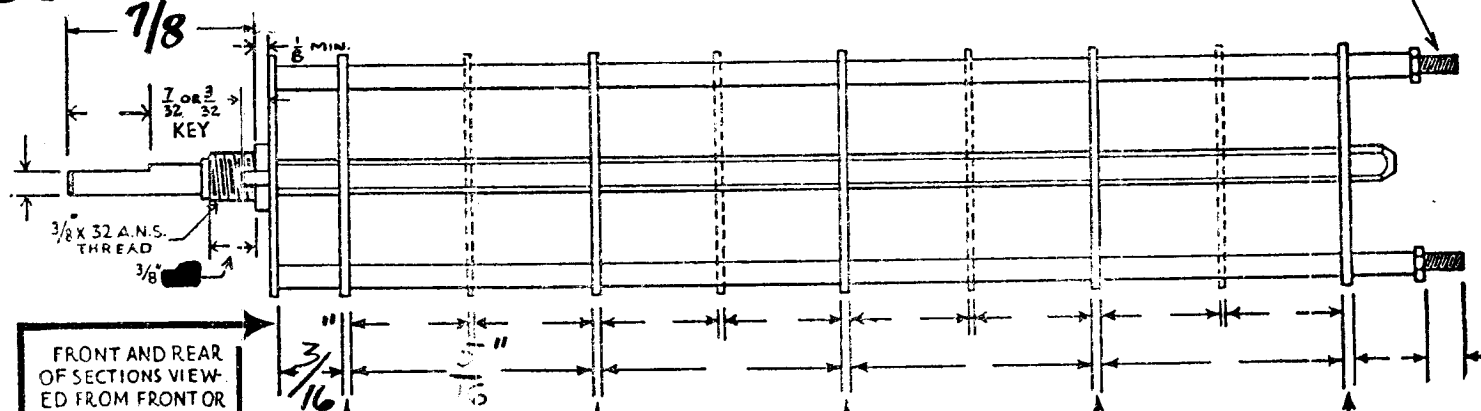
OAK TYPE F SWITCH

CUSTOMER **THE TECHNICAL MATEREX CORPORATION** CUSTOMER'S SW-122 PART NO.



LOCATING KEY ONLY AT POINT SHOWN

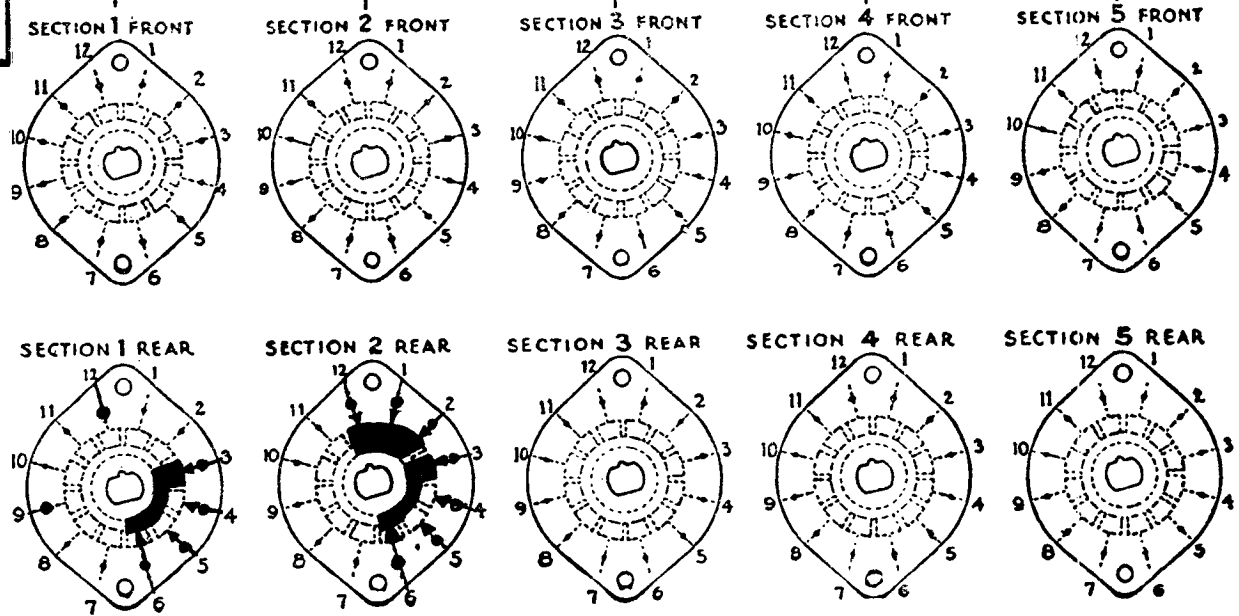
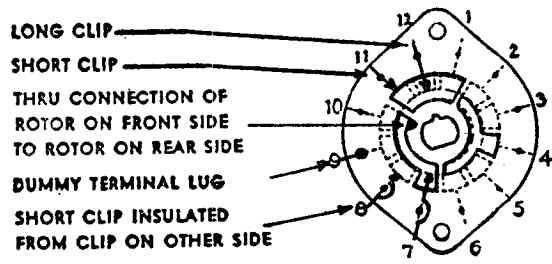
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. ± 3° STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE



FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 2
 NUMBER OF POSITIONS 3
 ANGLE OF THROW 30° (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



CUSTOMER NOTES

SI, DVM

NOTE: REPLACES AES018 OR AES030

SW-122

SUPERCEDES AES034

0918
G.T.O

DATE 11/23/51

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE MYCALEX SPECIFY IMPREGNATION IF REQUIRED
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200hr
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 3/8" - 32 NUTS 1/2" ACROSS FLATS; MATERIAL BR PLATING N.P.
1 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL P.B PLATING N.P.
 STAMP PART NUMBER SW-122 ON FRONT PLATE, YES NO
 (NUMBER)

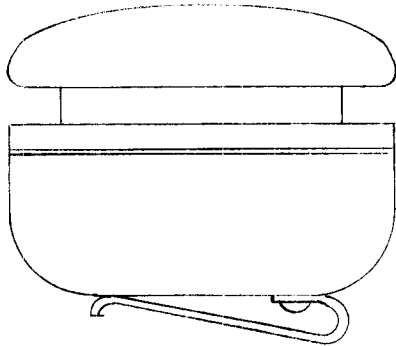
IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

SW-123

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
		A-368	2-16-53



DOUBLE POLE SINGLE THROW
NORMALLY OPEN.
SUPPLIED WITH CLOTHING CLIP.

REF. TELEPHONICS CORP.

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE	SWITCH	
		MATERIAL	PRESS TO TALK	
		WEIGHT PER PC.		
		TYPE & TEMPER	AD 2-16-53	
			DRAWN	ELEC. DES. APP. MECH. DES. APP.
			CHECKED	FINAL APPROVAL
		HEAT TREAT. SPEC.		
		FINISH & SPEC. NO.		
				SW-123

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES

SCALE

ALL OTHERS	DEC. DIM. \pm FRAC. DIM. \pm ANGULAR DIM. \pm
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DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

CUSTOMER'S SW-124
PART NO.

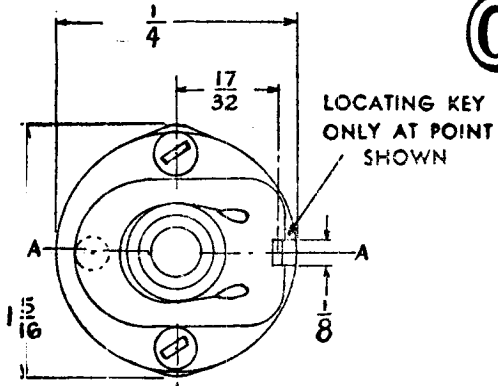
CUSTOMER

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE F SWITCH

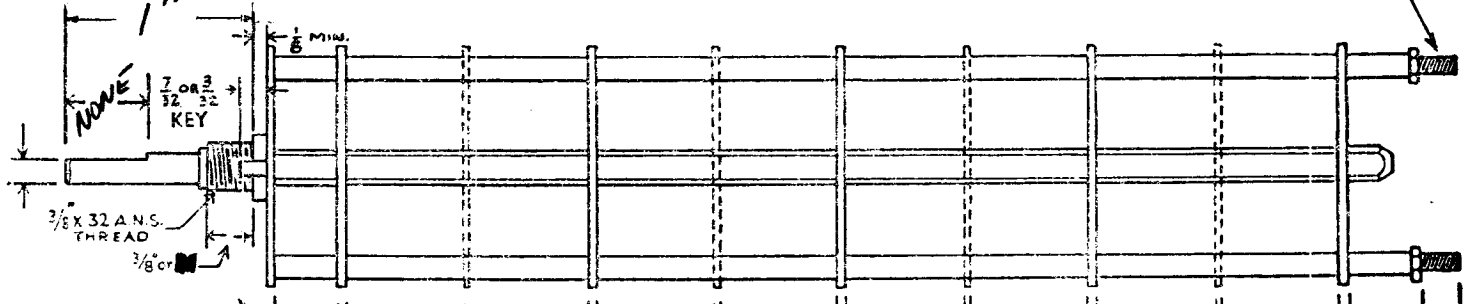
SW-124

4-40 THREAD



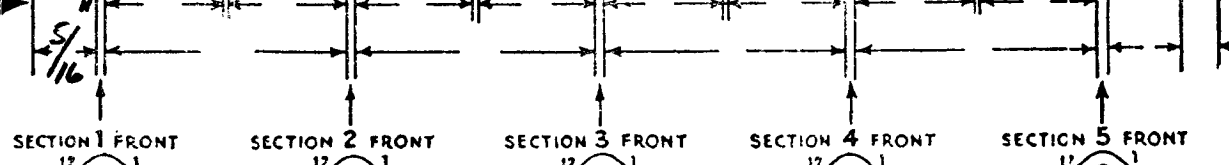
LOCATING KEY
ONLY AT POINT
SHOWN

SHOW CUT AWAY PORTION
OF FLAT IN BLACK AND GIVE
ANGLE TO LINE A-A. $\pm 3^\circ$
STANDARD RMA KNURLED AND
SLOTTED SHAFT ALSO AVAILABLE

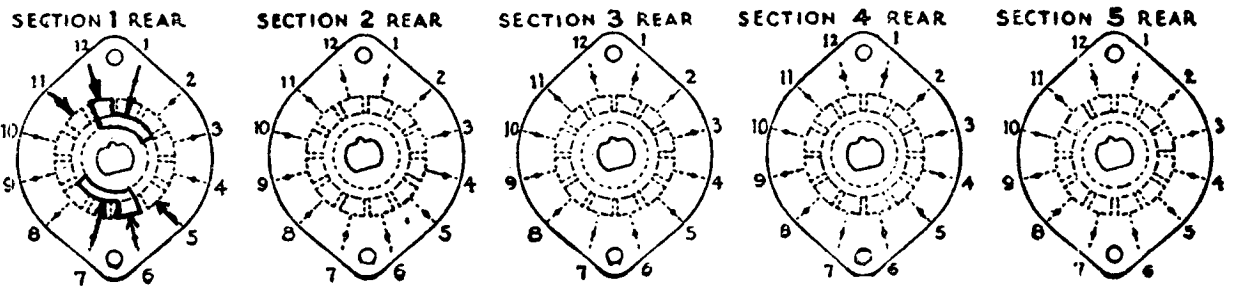
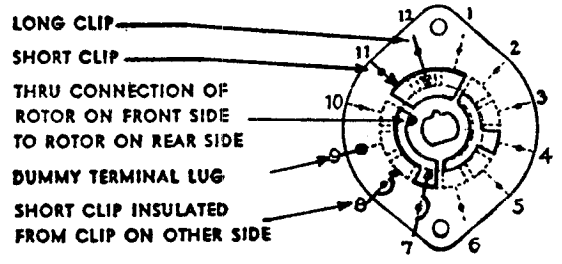


FRONT AND REAR
OF SECTIONS VIEW-
ED FROM FRONT OR
KNOB END OF SWITCH
IN EXTREME COUNTER-
CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{2}$
NUMBER OF POSITIONS $\frac{1}{2}$
ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH
SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200hr
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER
 PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2" ACROSS FLATS; MATERIAL BR PLATING NICKEL
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL BR PLATING "
 STAMP PART NUMBER SW-124 ON FRONT PLATE, YES NO
 (NUMBER)

CUSTOMER NOTES

SS,6 DCO

SW-124

SUPERCEDES.
AES031

ARB

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

SW-141 B

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT

USED ON

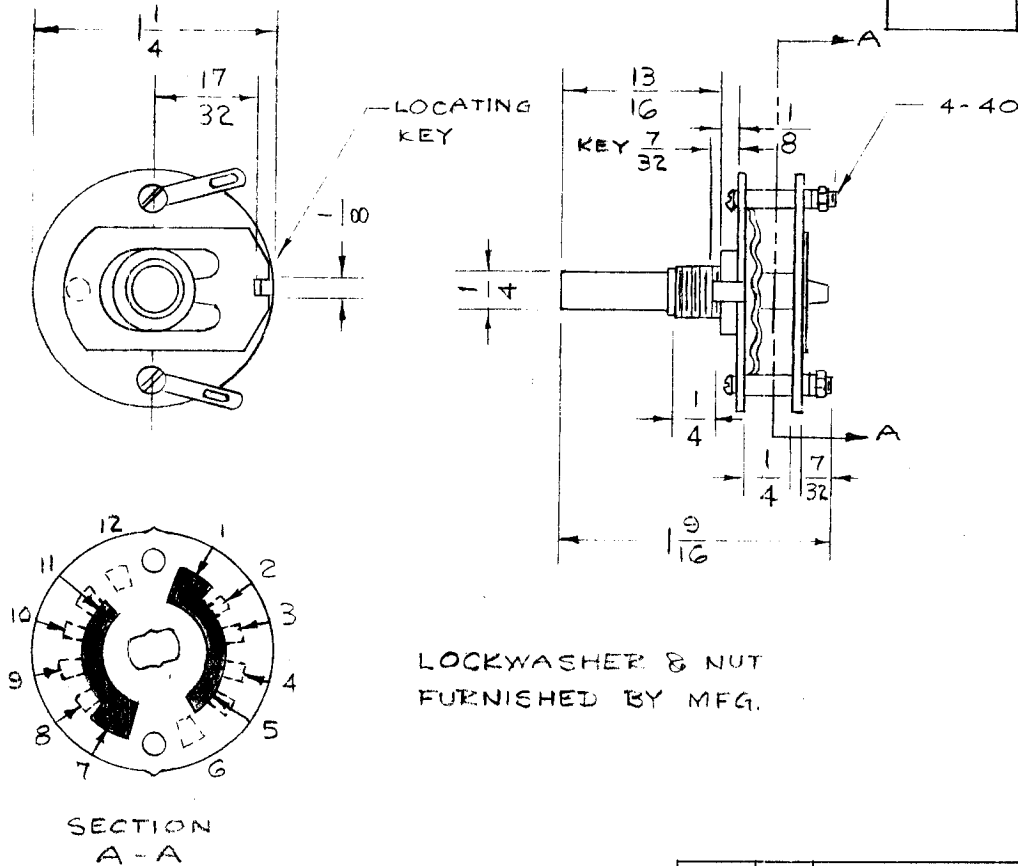
MODEL

PROJECT NO.

ASS'Y. NO.

DATE

9-4-53



NUMBER OF SECTIONS - 1
 NUMBER OF POSITIONS - 4
 ANGLE OF THROW - 30°
 SHAFT - ROUND
 NON SHORTING
 INSULATION - BAKELITE
 CONTACTS & ROTOR - BRASS-SILVER PLATE
 MUST PASS 50 HOUR SALT SPRAY TEST
 STAMP SW-141 ON FRONT PLATE.
 METAL PARTS EXCEPT TERMINALS
 AND CONTACTS SHALL BE CHROMIUM
 DIPPED AND CHROMIUM PLATED

B	2	REF. DELETED	4/4/56	2	JAW	CS	UD
A	1	PICTORIAL AND SPEC. ADDED	3/27/56	1	PB	CS	UD
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES		SCALE	#
ALL OTHERS:	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.	

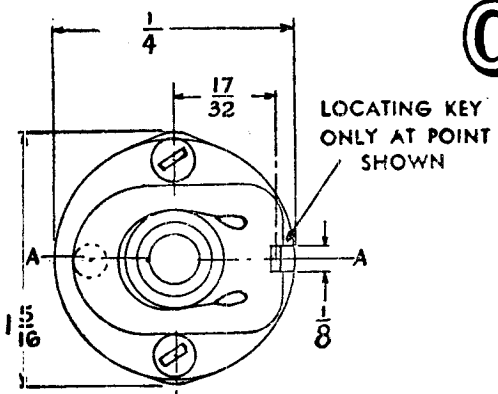
REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
STOCK SIZE			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
MATERIAL			SWITCH, ROTARY	
WEIGHT PER PC.			C.D.D. 1-12-53	
TYPE & TEMPER			DRAWN	
HEAT TREAT. SPEC.			ELEC. DES. APP.	
FINISH & SPEC. NO.			MECH. DES. APP.	
			CHECKED	
			FINAL APPROVAL	
			SW-141 B	

CUSTOMER'S SW-125
PART NO.

OAK TYPE F SWITCH

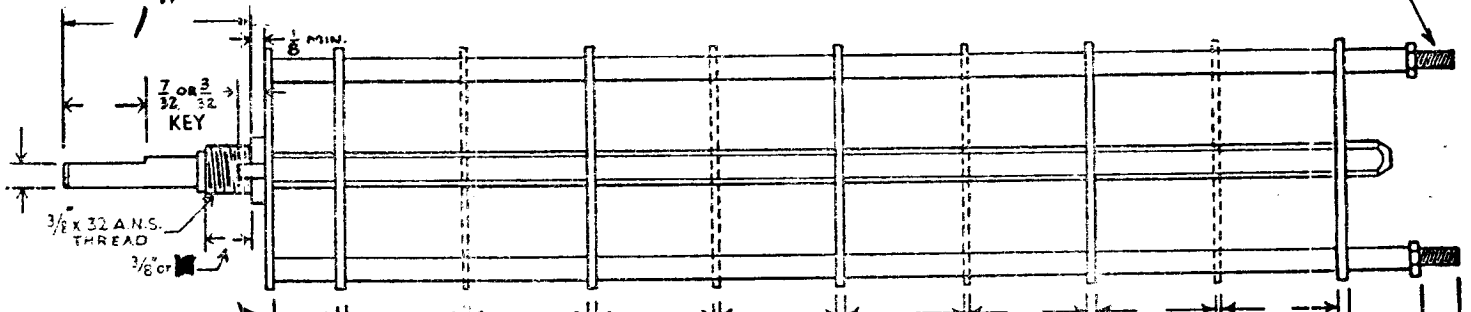
SW-125

4-40 THREAD



LOCATING KEY ONLY AT POINT SHOWN

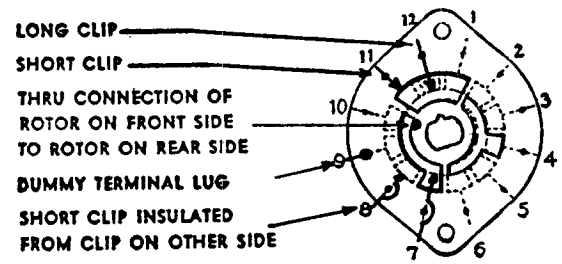
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE



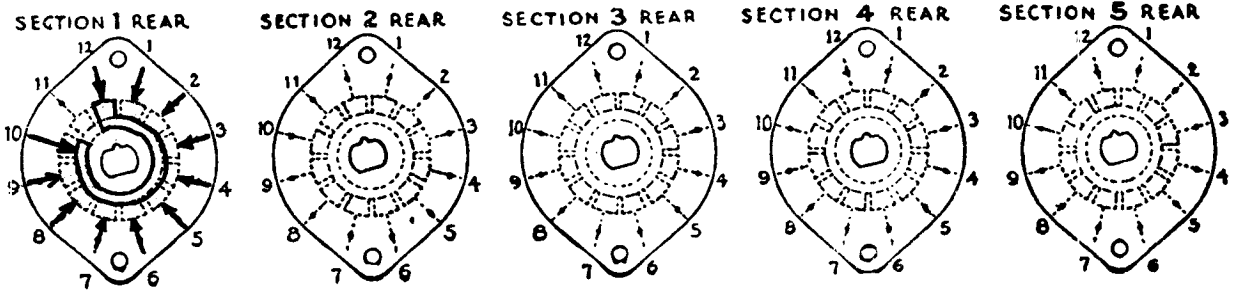
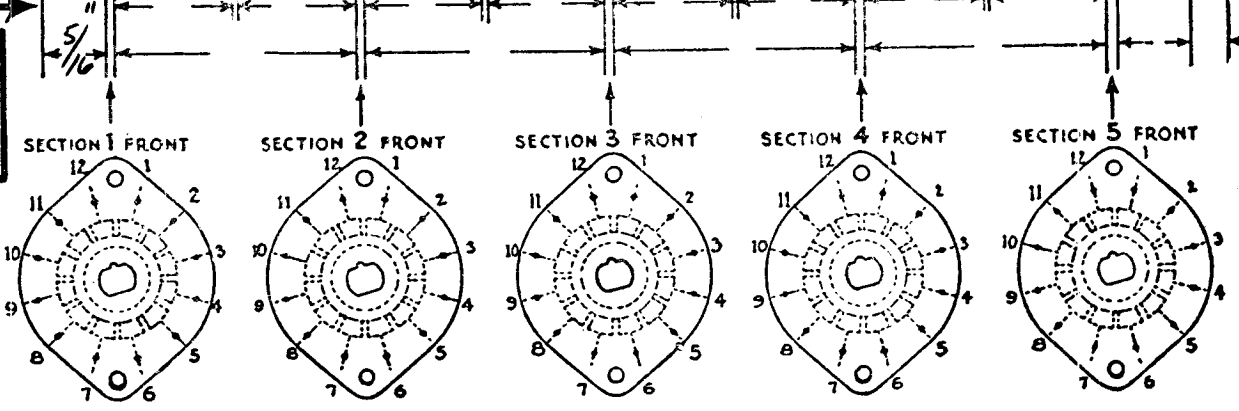
FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{10}$
 NUMBER OF POSITIONS $\frac{10}{30^\circ}$ (30° OR 60°)
 ANGLE OF THROW

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



CUSTOMER NOTES

S7, DCO

SW-125

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) room
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTIN HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2" ACROSS FLATS; MATERIAL BR PLATING N.P.
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL BR PLATING N.P.
 STAMP PART NUMBER SW-125 ON FRONT PLATE, YES NO

SUPERCEDES
 AES032
 DATE 10/22/57

CUSTOMER

OAK MANUFACTURING CO.
1260 CLYBORN AVE., CHICAGO 10, ILL.

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

SW-142

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

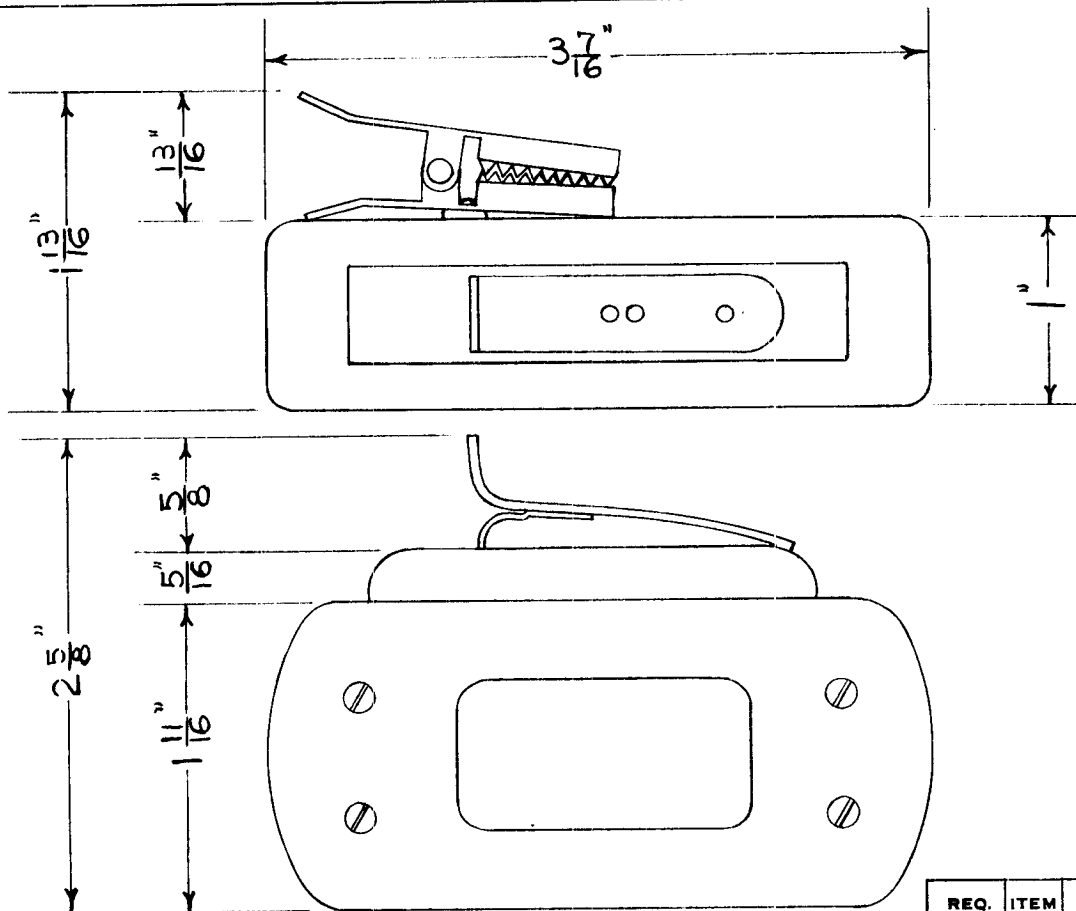
MODEL

PROJECT NO.

ASS'Y. NO.

DATE

31/5/55



NOTICE TO PERSONS RECEIVING THIS DRAWING

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Property of:

THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, NEW YORK

DIMENSIONS FOR REF. ONLY

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			TMC (Canada) LIMITED	
			OTTAWA ONTARIO	
			SWITCH, MOMENTARY CONTACT	
			WITH LOCK	
			<i>E. Champ</i>	
			DRAWN	ELEC. DES. APP. MECH. DES. APP.
			CHECKED	FINAL APPROVAL
				SW-142

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES

SCALE FULL

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

ALL OTHERS
DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

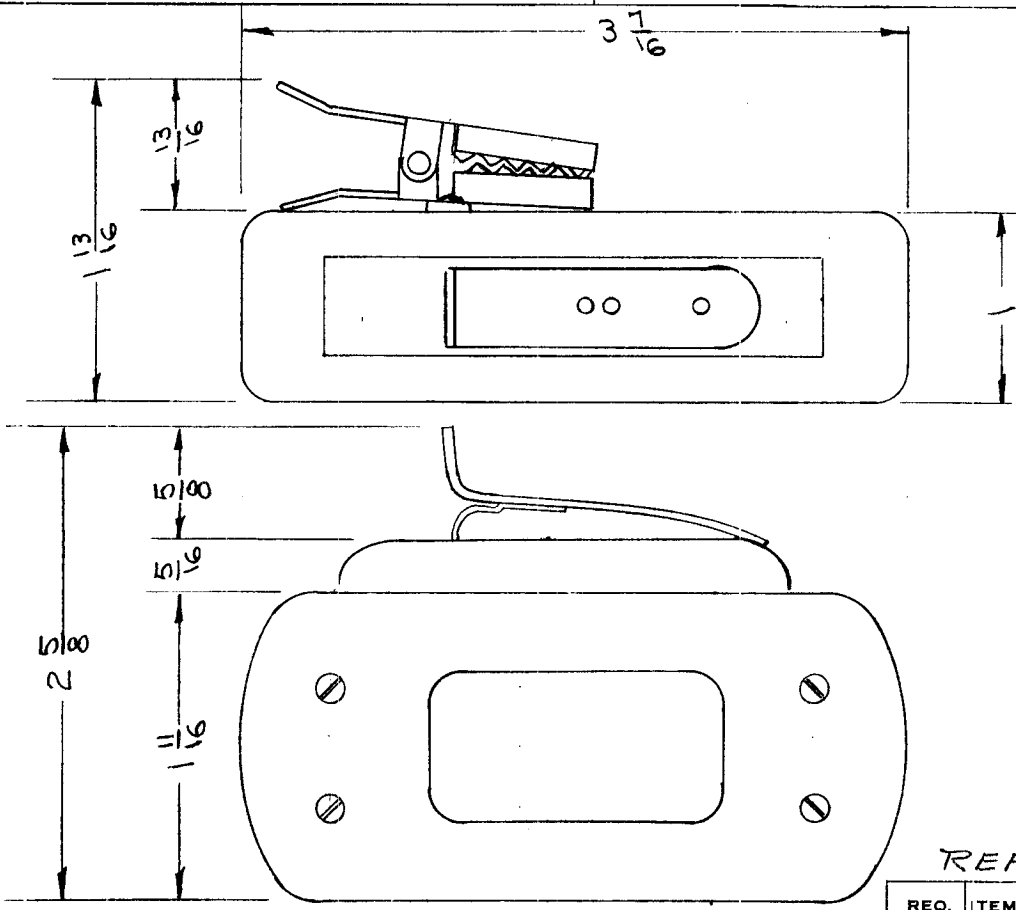
IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

SW-142

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
-------	-------------	------------	------



DIMENSIONS FOR REF. ONLY

REF: ROANWELL 9992

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP.	
			MAMARONECK. NEW YORK	
STOCK SIZE			SWITCH MOMENTARY CONTACT WITH LOCK	
MATERIAL		WEIGHT PER PC.		
TYPE & TEMPER			DRAWN <i>JAW</i>	MECH. DES. APP. <i>WJ</i>
HEAT TREAT. SPEC.			CHECKED <i>JAW</i>	FINAL APPROVAL <i>WJ</i>
FINISH & SPEC. NO.			SW-1421	

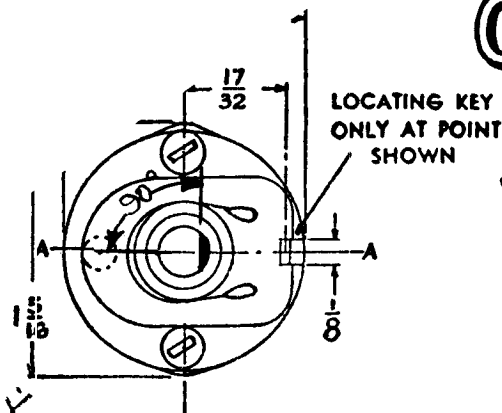
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
TOLERANCES			SCALE FULL				
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±		DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.				

OAK MFG. CO.
 1260 CLYBORN AVE., CHICAGO 10, ILL.
 CUSTOMER THE TECHNICAL MATERIAL CORP.
 CORPORATION
 MAMARONECK, N.Y.

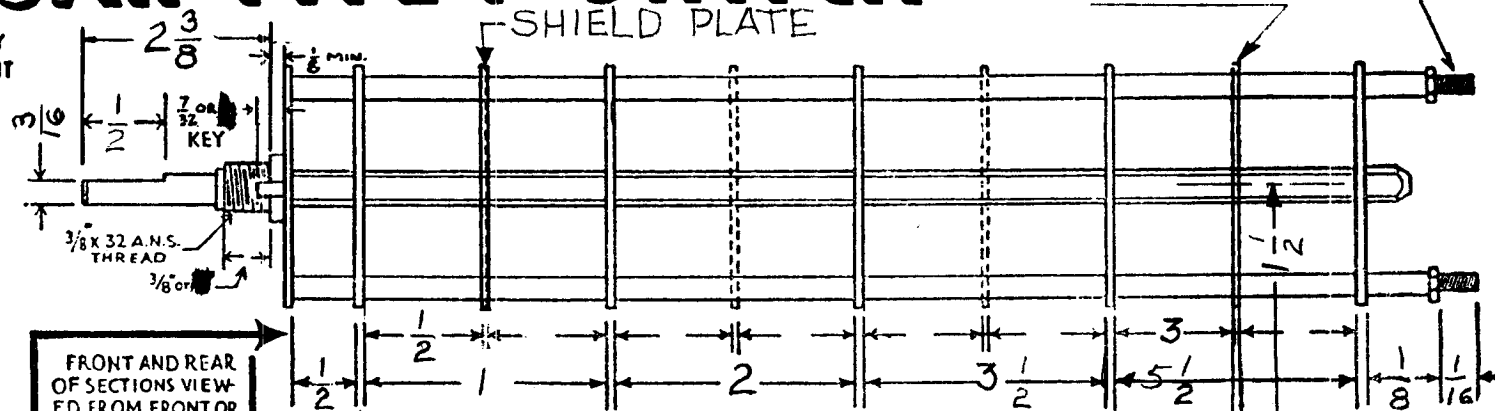
OAK TYPE F SWITCH

SW-146

L BRACKET 4-40 THREAD



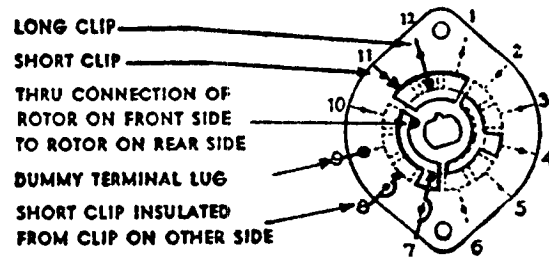
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE



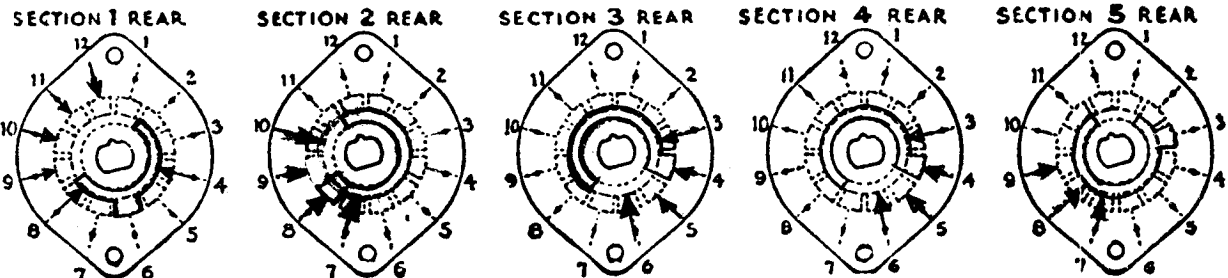
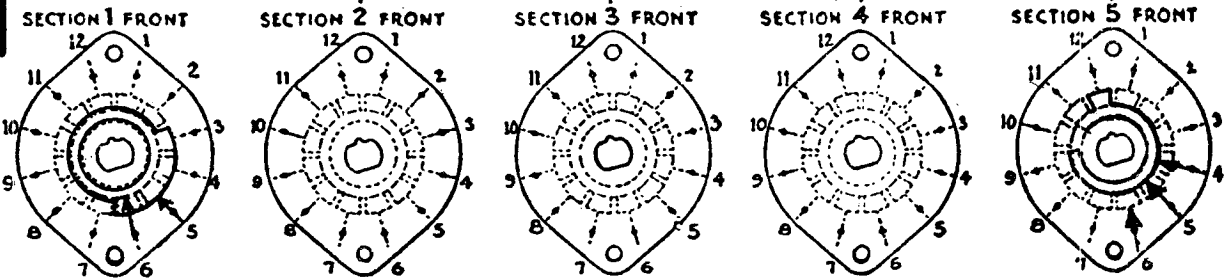
FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 5
 NUMBER OF POSITIONS 7
 ANGLE OF THROW 30 (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



CUSTOMER NOTES

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 HR.
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1 ACROSS FLATS; MATERIAL BRASS PLATING NICKEL
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL STEEL PLATING NICKEL
 STAMP PART NUMBER SW-146 ON FRONT PLATE, YES NO
 (NUMBER)

BAND WIDTH CONTROL

USED ON VTR

ENG - G.T.O
CHECK'D - P.L.K.

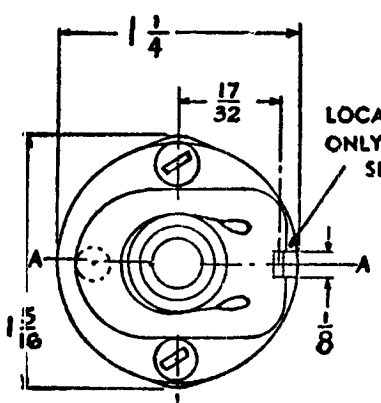
SW-146

DATE 6/11/54

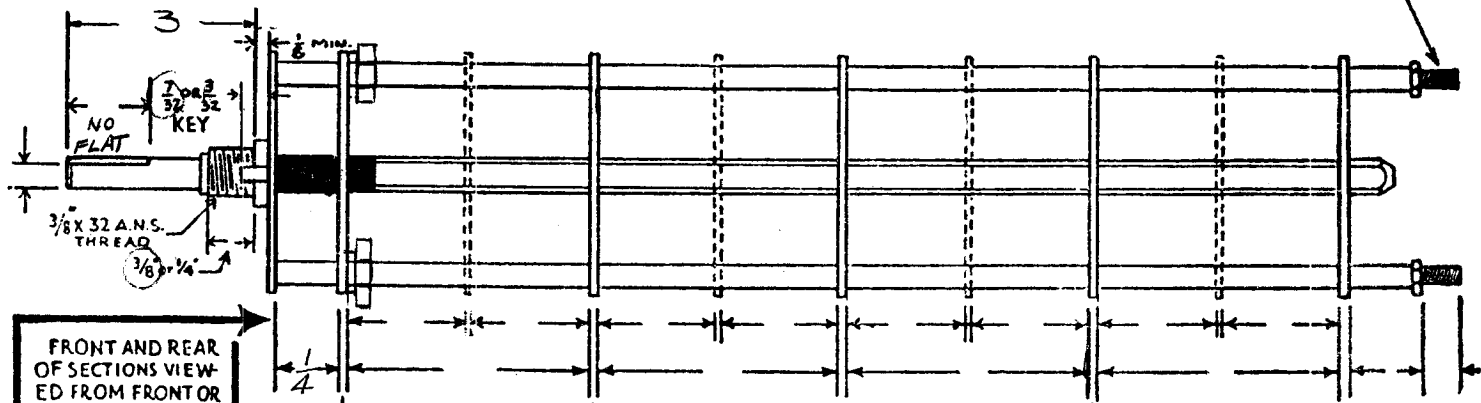
SW-147

OAK TYPE F SWITCH

4-40 THREAD



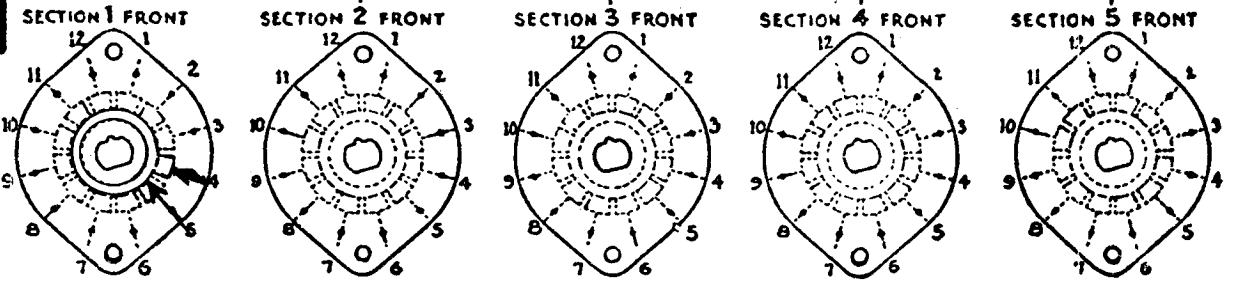
LOCATING KEY ONLY AT POINT SHOWN



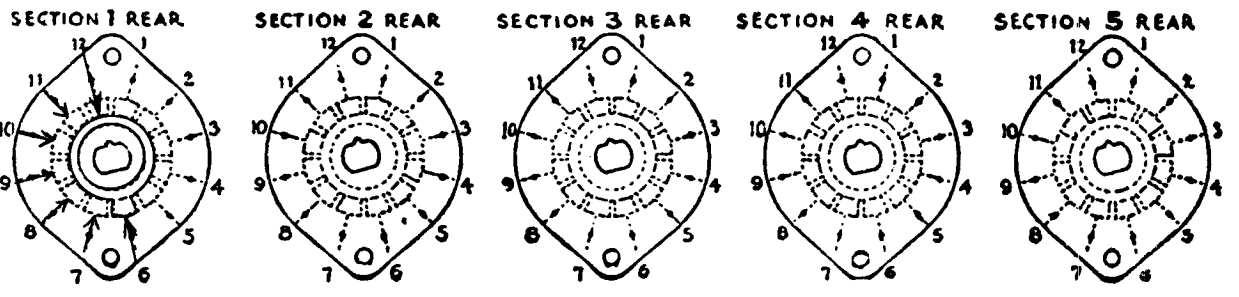
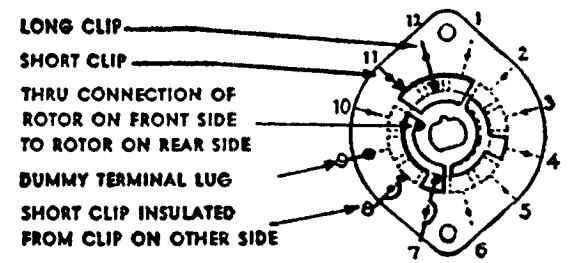
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{6}$
 NUMBER OF POSITIONS $\frac{1}{6}$
 ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTIN TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS)
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY $\frac{1}{8}$ " - 32 NUTS $\frac{1}{2}$ " ACROSS FLATS; MATERIAL BR. PLATING NK.
 $\frac{1}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL BR. PLATING NK.
 STAMP PART NUMBER SW 147 ON FRONT PLATE, YES N

CUSTOMER NOTES	
SWITCH, ROTARY CRYSTAL SELECTIVITY	
THE TECHNICAL MATERIEL CORPORATION	
MAMARONECK NEW YORK	
DATE 4/1/55	APPD. P. R.
DRAWN H.H.	APPD. G.T.O.
SHEET 1 OF 1	NO SW 147 JA

GPR-90

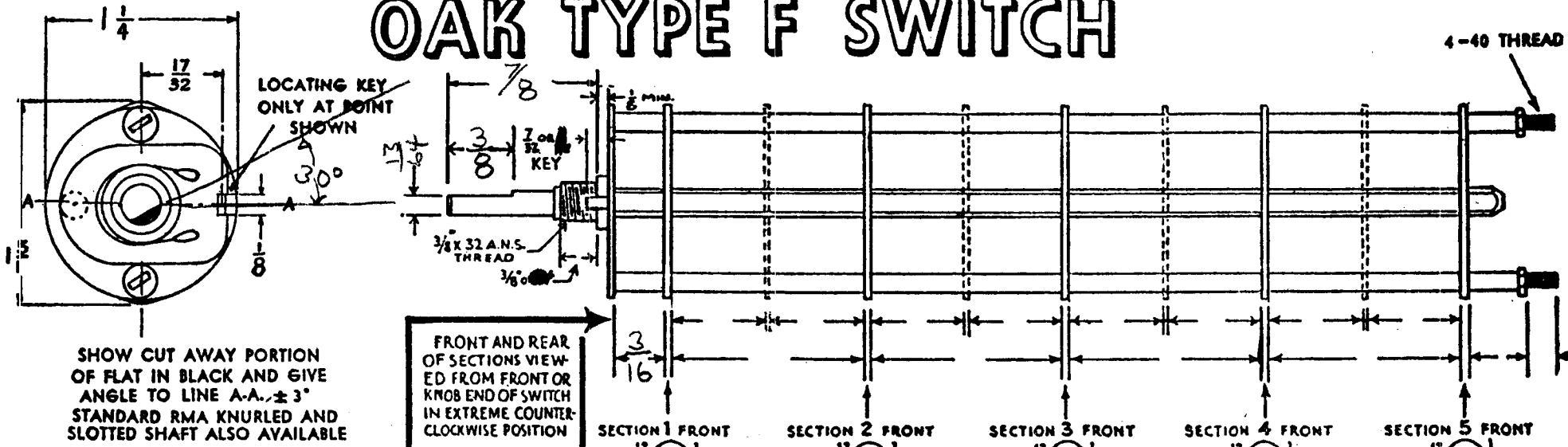
DATE

REV-A - 3" DIM WAS 2 7/8 IN PICT - 11-26-63 - EMM 10570 - 100
 CUSTOMER THE TECHNICAL MATERIEL CORPORATION
 CUSTOMER'S SW 147
 OAK MFG. CO.
 1260 CLYBORN AVE., CHICAGO 10, ILL.

SW-148

OAK TYPE F SWITCH

4-40 THREAD

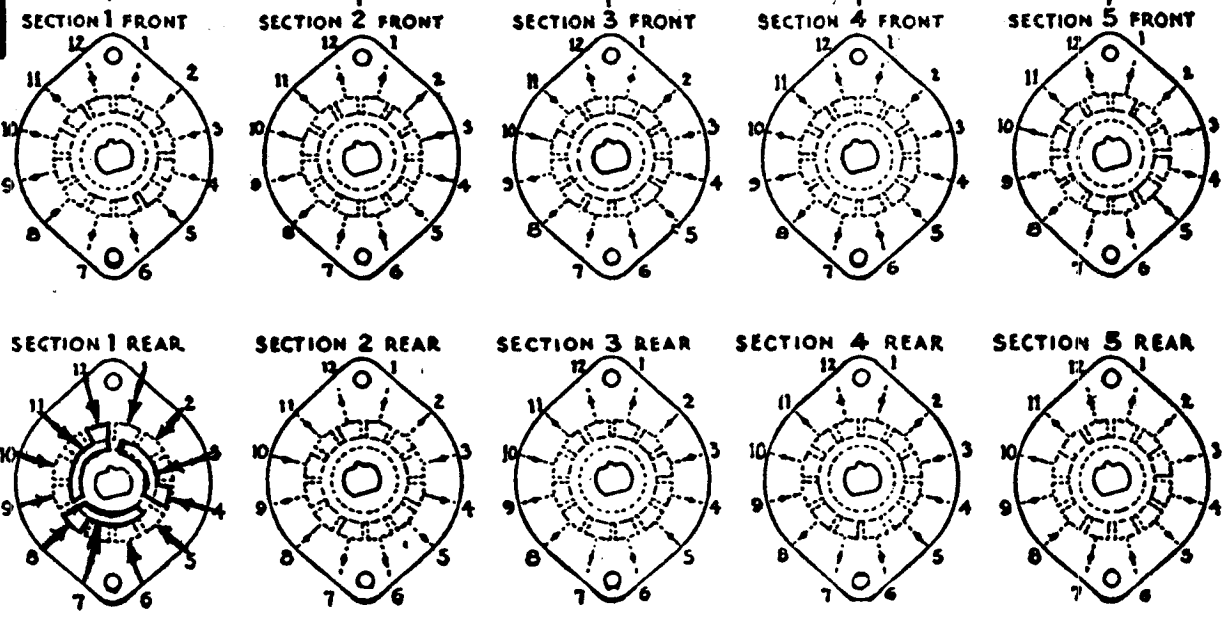
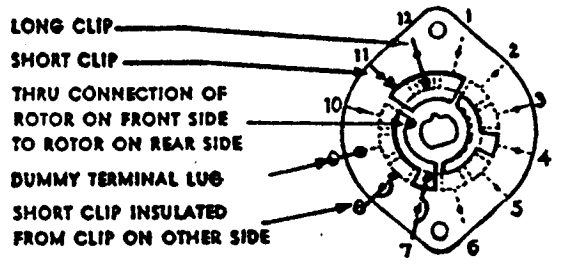


SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 1
 NUMBER OF POSITIONS 3
 ANGLE OF THROW 30° (30° OR 40°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 200 HRS.
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " - 32 NUTS 1/2" ACROSS FLATS; MATERIAL BR. PLATING NICK.
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL " PLATING "
 STAMP PART NUMBER SW-148 ON FRONT PLATE, YES NO

CUSTOMER NOTES

P.M.O.
 OAK CAT. # 64331-F1X
 SWITCH ROTARY

A	SECTION 1 REAR, CHANGED 7/8 WAS 1"	8/9/54	AT
LET	SHAFT PLATED DESCRIPTION	DATE	APP
SW-148 A		DATE 9-9-54	

M.H.S. A.J.J.

CUSTOMERS PART NO. SW-148

THE TECHNICAL MATERIAL CORP.

CUSTOMER

OAK MFG. CO.

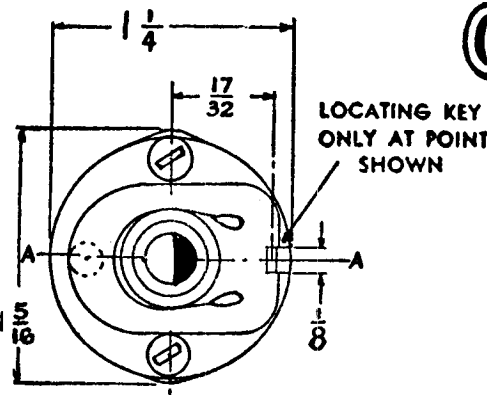
1260 CLYBOURN AVE, CHICAGO 10, ILL

CUSTOMER'S SW-149
 The Technical Material Corp.
 CUSTOMER
 OAK MFG. CO.
 1260 CLYBORN AVE., CHICAGO 10, ILL.

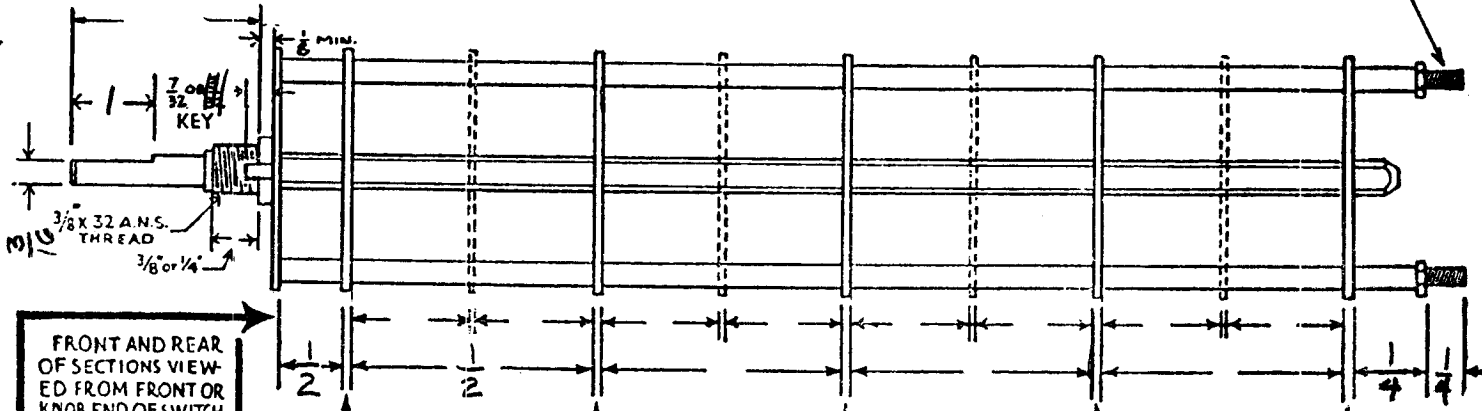
OAK TYPE F SWITCH

SW-149

4-40 THREAD



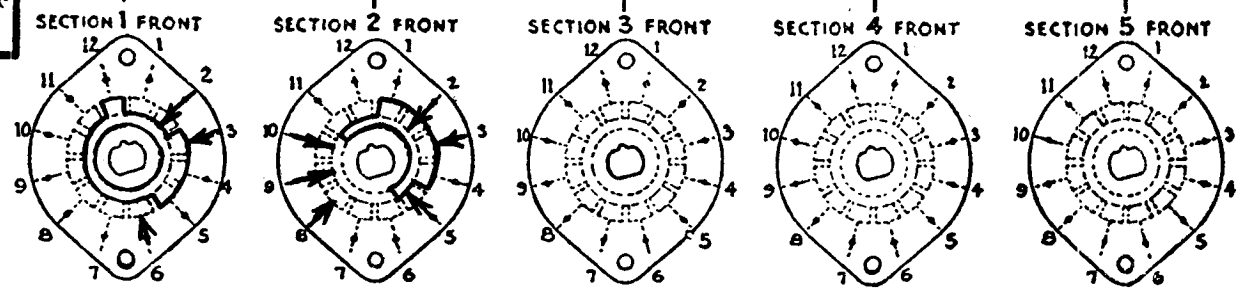
LOCATING KEY ONLY AT POINT SHOWN



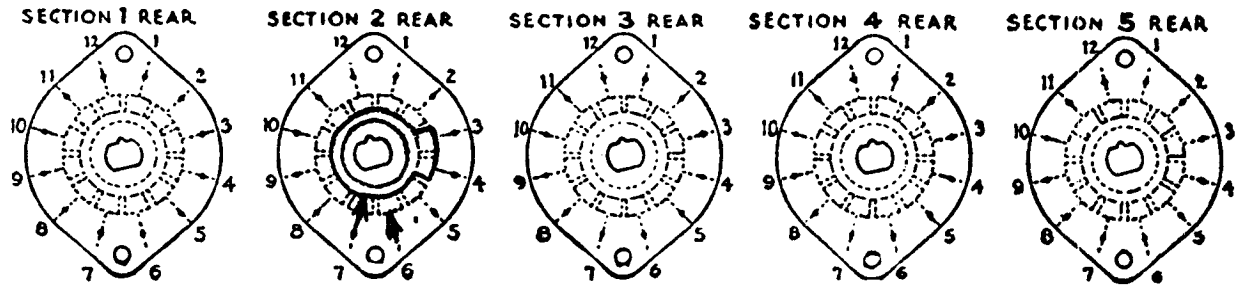
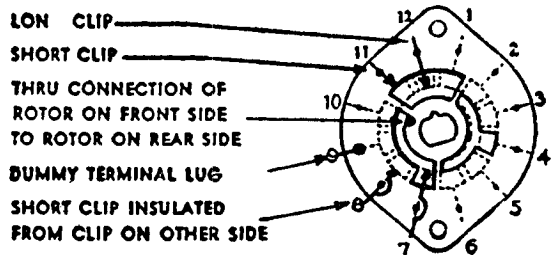
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. ± 3° STANDARD RMA KNURLLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 2
 NUMBER OF POSITIONS 6
 ANGLE OF THROW 30 (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



CUSTOMER NOTES

OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: 1/16 BAKELITE 1/8 MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 100HR.
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 3/8" . 32 NUTS 2 ACROSS FLATS; MATERIAL BRASS PLATING Nickel
1 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL BRASS PLATING Nickel
 STAMP PART NUMBER SW-149 ON FRONT PLATE, YES NO
 (NUMBER)

AUDIO SWITCH, VTR		
THE TECHNICAL MATERIAL CORP.		
July 27, 1954	SW-149	
P.L.K.	G.T.O	DAY

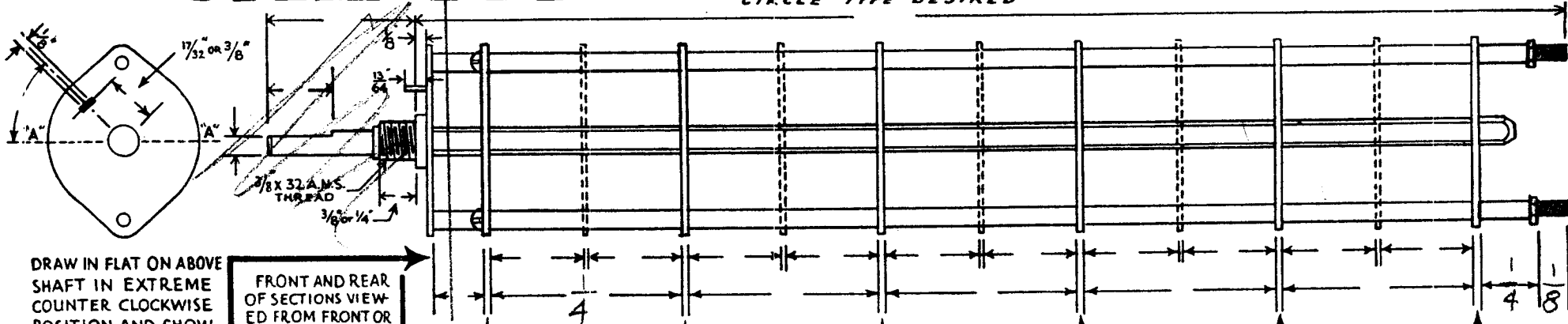
OAK TYPE

(H. (HC) DH, DHC, QH, QDH, OHC, ODHC.)

SWITCH

CIRCLE TYPE DESIRED

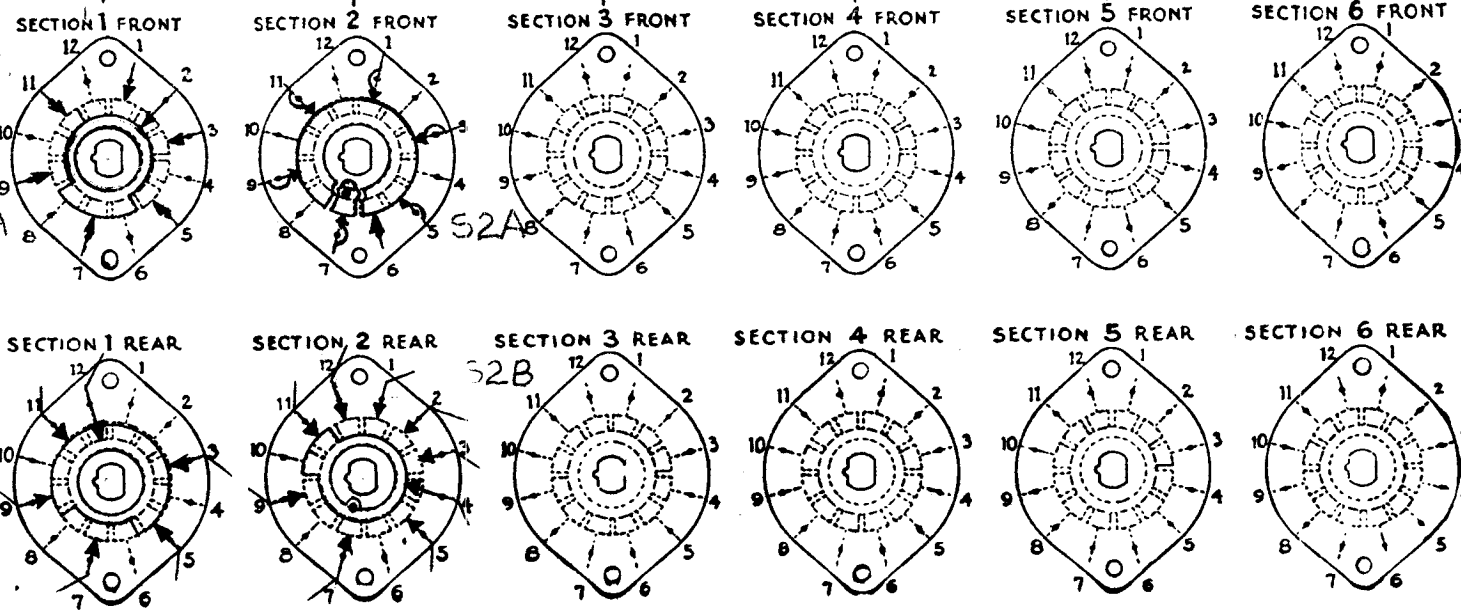
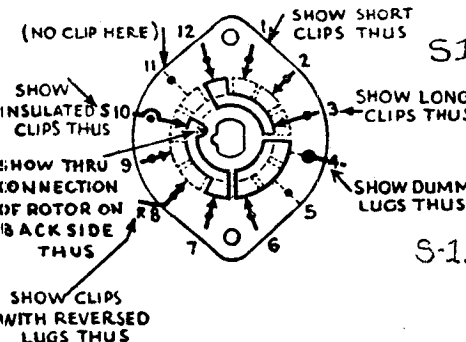
CUSTOMER'S SW-151
PART NO.
The Technical Material Corp
CUSTOMER
OAK MANUFACTURING CO.,
1260 CLYBORN AVE., CHICAGO 10, ILL.



DRAW IN FLAT ON ABOVE SHAFT IN EXTREME COUNTER CLOCKWISE POSITION AND SHOW ANGLE IN REFERENCE TO LINE "A-A"

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

TOTAL NO. OF SECTIONS 2
NO. OF POSITIONS 6



OUTLINE ROTOR BLADES AS ABOVE IN EXTREME COUNTER-CLOCKWISE (LEFT) POSITION

FILL IN ALL DIMENSIONS INDICATED ABOVE AND CHECK ALL SPECIFICATIONS BELOW. REFER TO OAK ENGINEERING DATA SHEETS FOR STANDARD DIMENSIONS OF TYPE DESIRED AND FOR SPECIMEN OF THIS LAYOUT SHEET. TO OBTAIN MOST ECONOMICAL UNITS AND SHORTEST DELIVERY DATES PLEASE ADHERE TO THE STANDARDS AS CLOSELY AS POSSIBLE.

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE ; CERAMIC SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 100 HR
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 3/8" - 32 NUTS ACROSS FLATS; MATERIAL PLATING
3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL PLATING
 STAMP PART NUMBER ON FRONT PLATE, YES NO

CUSTOMER NOTES

BAND SWITCH - VTR
R.F. Stage
Sept. 24 '54
P.L.K.

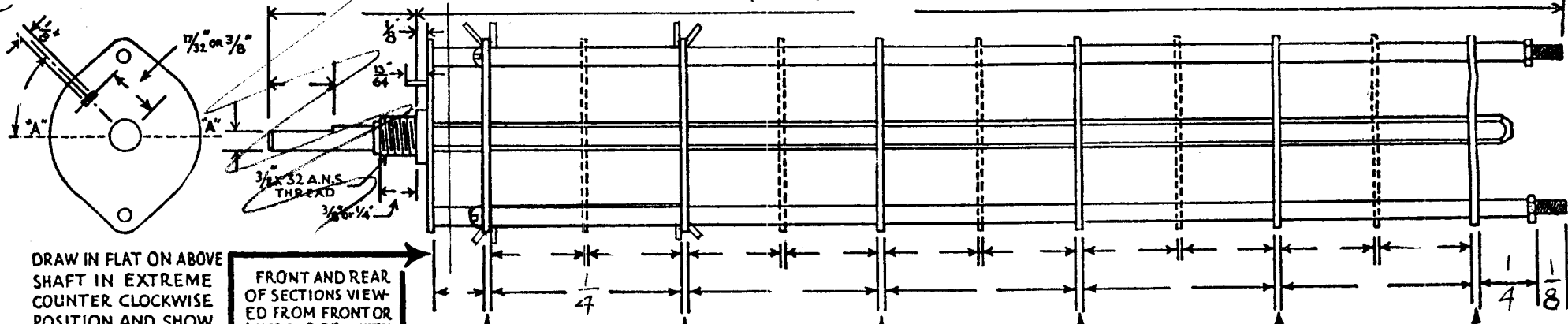
SW-151

DATE _____

CUSTOMER: The Technical Material Company
 CUSTOMER'S SN-152-A
 PART NO. (EMNS84)
 OAK MFG. CO.
 1260 CLYBORN AVE., CHICAGO 10, ILL.

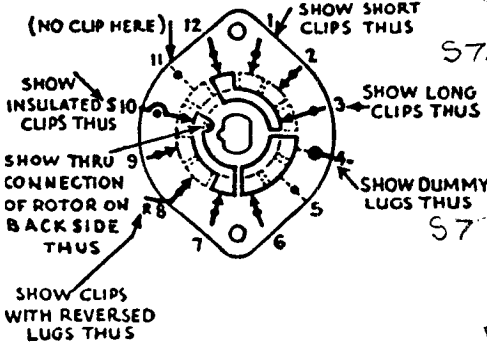
OAK TYPE (H, HC, DH, DHC, OH, GDH, OHC, ODHC.) SWITCH

CIRCLE TYPE DESIRED

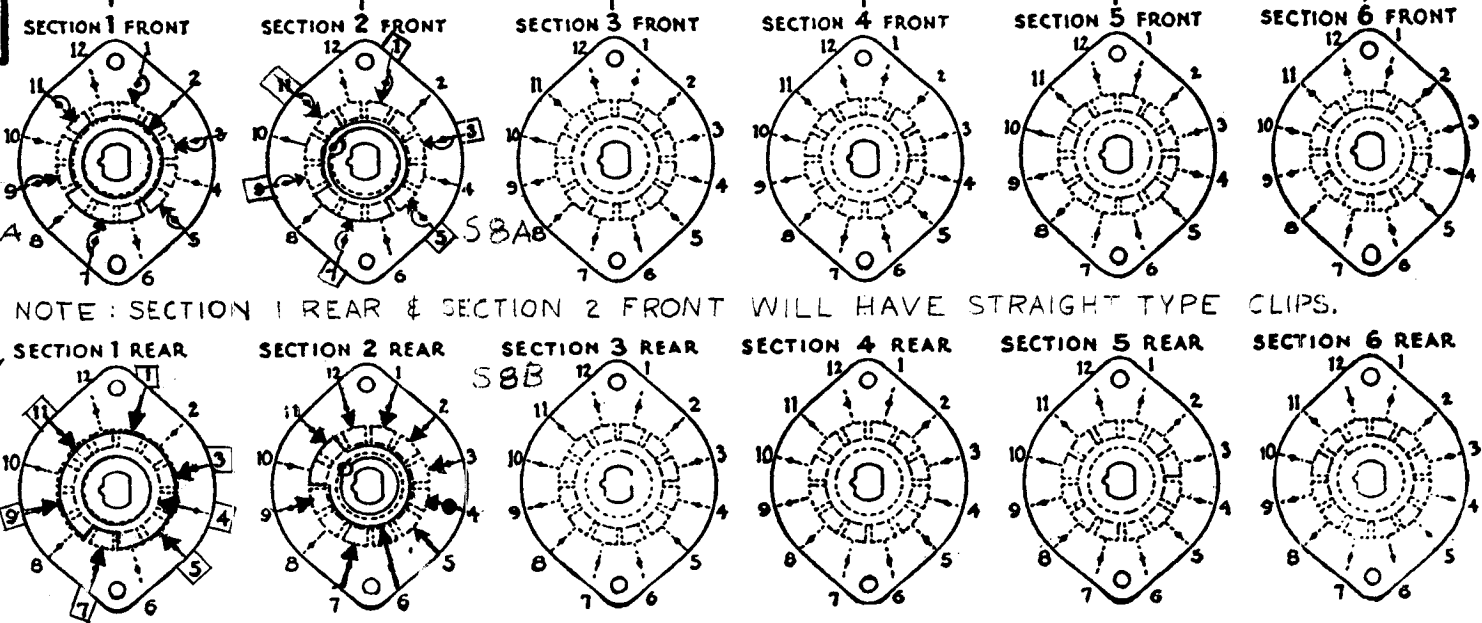


DRAW IN FLAT ON ABOVE SHAFT IN EXTREME COUNTER CLOCKWISE POSITION AND SHOW ANGLE IN REFERENCE TO LINE "A-A"
 FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER CLOCKWISE POSITION

TOTAL NO. OF SECTIONS 2
 NO. OF POSITIONS 6



OUTLINE ROTOR BLADES AS ABOVE IN EXTREME COUNTER-CLOCKWISE (LEFT) POSITION



NOTE: SECTION 1 REAR & SECTION 2 FRONT WILL HAVE STRAIGHT TYPE CLIPS.

CUSTOMER NOTES

BAND SWITCH - VTR
 OSCILLATOR STAGE

9/24/54
 P.L.K.

SW-152-A

FILL IN ALL DIMENSIONS INDICATED ABOVE AND CHECK ALL SPECIFICATIONS BELOW.
 REFER TO OAK ENGINEERING DATA SHEETS FOR STANDARD DIMENSIONS OF TYPE DESIRED AND FOR SPECIMEN OF THIS LAYOUT SHEET. TO OBTAIN MOST ECONOMICAL UNITS AND SHORTEST DELIVERY DATES PLEASE ADHERE TO THE STANDARDS AS CLOSELY AS POSSIBLE.

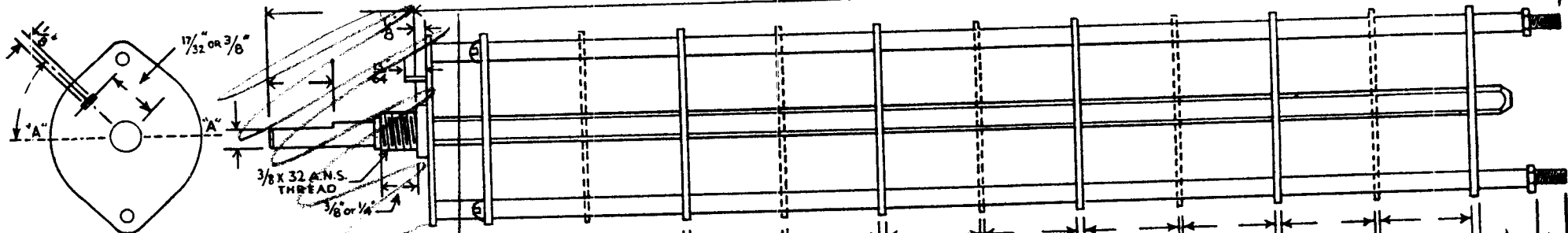
SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE ; CERAMIC SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 100 hrs.
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 3/8" - 32 NUTS ACROSS FLATS; MATERIAL PLATING
3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL PLATING
 STAMP PART NUMBER ON FRONT PLATE, YES NO (NUMBER)

OAK TYPE (H. HC DH, DMC, QH, QDH, QHC, ODHC.) SWITCH

CIRCLE TYPE DESIRED

CUSTOMER'S PART NO. The Technical Material Corp

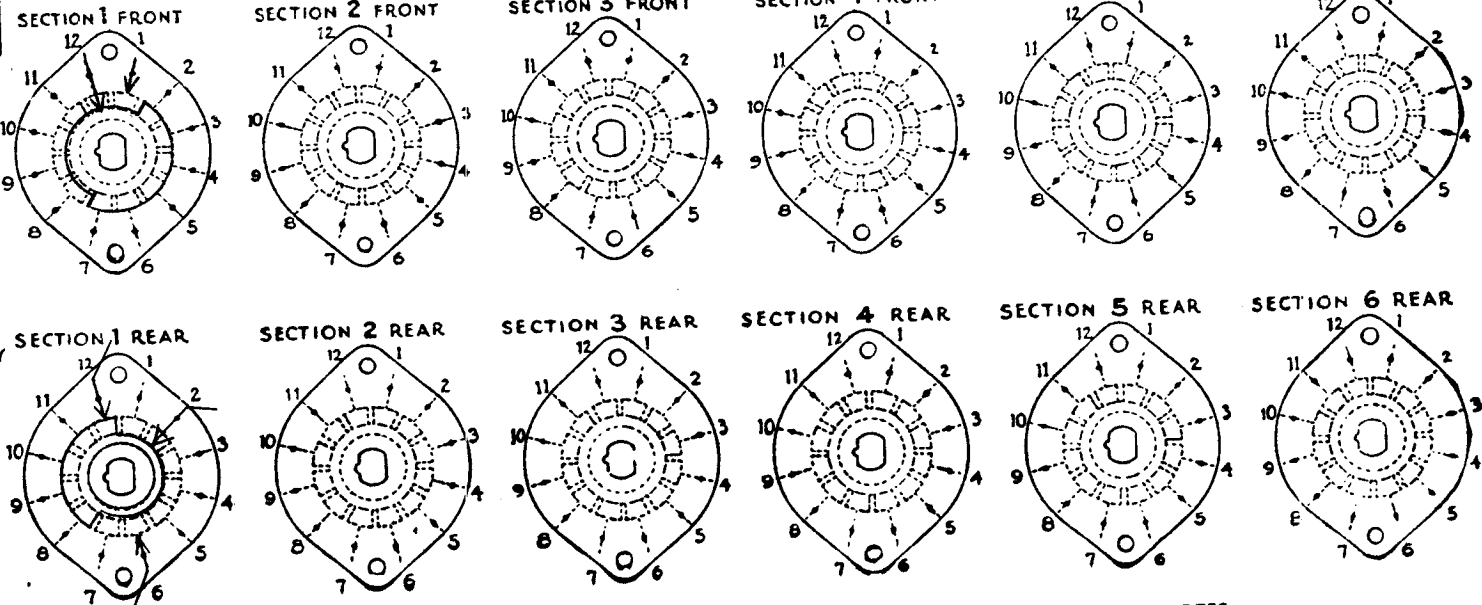
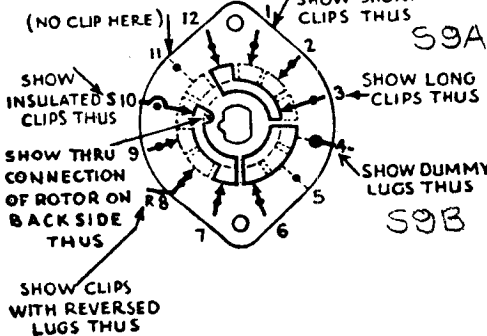


DRAW IN FLAT ON ABOVE SHAFT IN EXTREME COUNTER CLOCKWISE POSITION AND SHOW ANGLE IN REFERENCE TO LINE "A-A"

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

TOTAL NO. OF SECTIONS 1

NO. OF POSITIONS 6



OUTLINE ROTOR BLADES AS ABOVE IN EXTREME COUNTER-CLOCKWISE (LEFT) POSITION

CUSTOMER NOTES

FILL IN ALL DIMENSIONS INDICATED ABOVE AND CHECK ALL SPECIFICATIONS BELOW. REFER TO OAK ENGINEERING DATA SHEETS FOR STANDARD DIMENSIONS OF TYPE DESIRED AND FOR SPECIMEN OF THIS LAYOUT SHEET. TO OBTAIN MOST ECONOMICAL UNITS AND SHORTEST DELIVERY DATES PLEASE ADHERE TO THE STANDARDS AS CLOSELY AS POSSIBLE.

SPECIFICATIONS
 SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE CERAMIC SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ARMY NAVY SALT TEST (IF ANY GIVE DETAILS) 100 HR.
 CONTACTS AND ROTORS: SILVER PLATED BRASS SOLID SILVER ALLOY IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 3/8" - 32 NUTS ACROSS FLATS; MATERIAL PLATING
 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL PLATING
 STAMP PART NUMBER ON FRONT PLATE, YES NO

BAND SWITCH - VOR
 MIXER SWITCH
 SEPT. 20, 1934
 P.L.R.
 SW 1-153

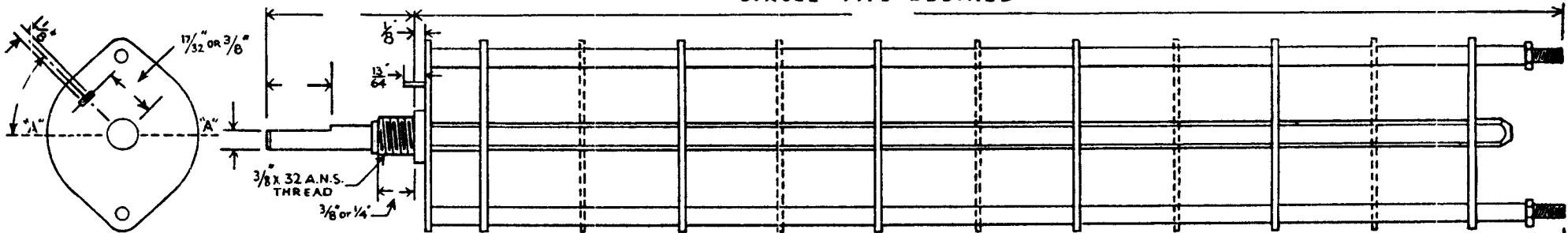
DATE _____

OAK MANUFACTURING CO. 1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE ^(H) HC, DH, DHC, QH, GDH, QHC, GDHC, SWITCH

SW-154

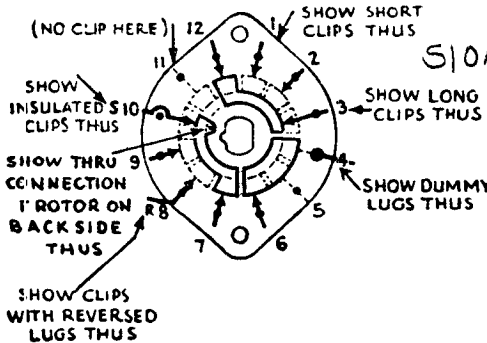
CIRCLE TYPE DESIRED



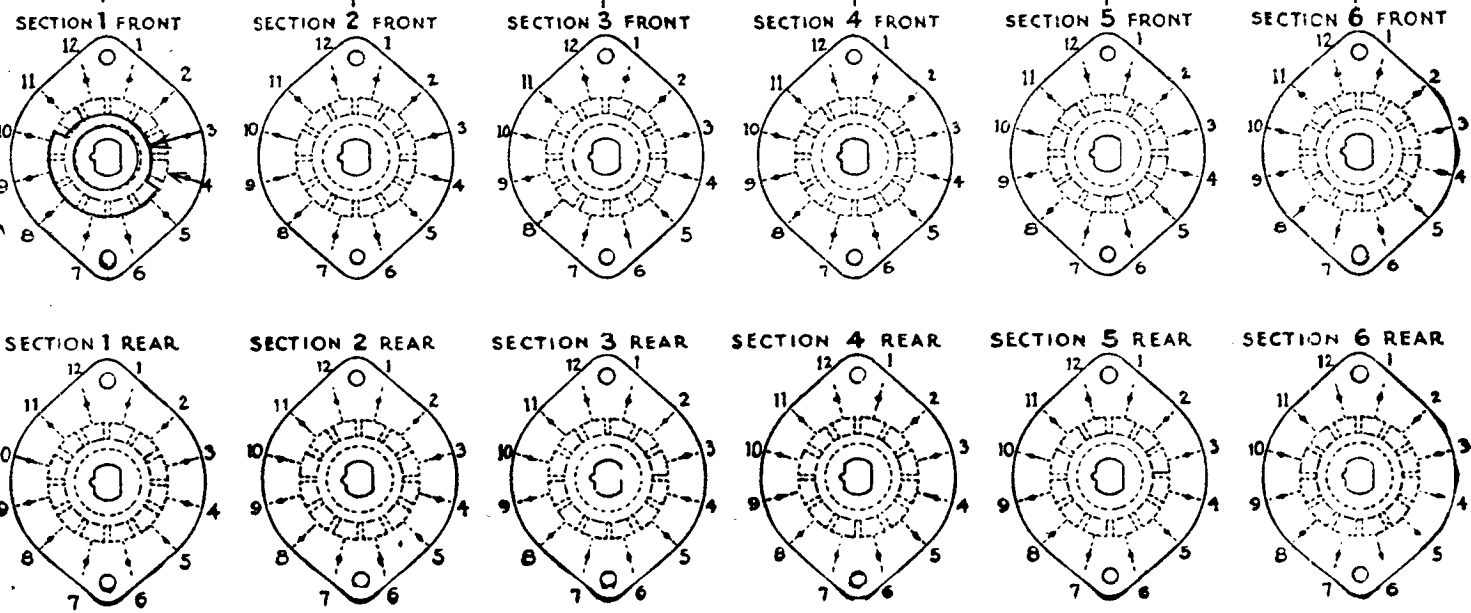
DRAW IN FLAT ON ABOVE SHAFT IN EXTREME COUNTER CLOCKWISE POSITION AND SHOW ANGLE IN REFERENCE TO LINE "A-A"

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

TOTAL NO. OF SECTIONS 1
 NO. OF POSITIONS 6



OUTLINE ROTOR BLADES AS ABOVE IN EXTREME COUNTER-CLOCKWISE (LEFT) POSITION



FILL IN ALL DIMENSIONS INDICATED ABOVE AND CHECK ALL SPECIFICATIONS BELOW. REFER TO OAK ENGINEERING DATA SHEETS FOR STANDARD DIMENSIONS OF TYPE DESIRED AND FOR SPECIMEN OF THIS LAYOUT SHEET. TO OBTAIN MOST ECONOMICAL UNITS AND SHORTEST DELIVERY DATES PLEASE ADHERE TO THE STANDARDS AS CLOSELY AS POSSIBLE.

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE CERAMIC SPECIFY IMPREGNATION IF REQUIRED _____
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) 100 HR.
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 3/8" - 32 NUTS _____ ACROSS FLATS; MATERIAL _____ PLATING _____
 _____ 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____
 STAMP PART NUMBER _____ ON FRONT PLATE, YES NO

CUSTOMER NOTES

BAND SWITCH - VFD
 2nd CONVERTER
 SEPT. 28, 1954
 P.L.K.
 SW 1-154

CUSTOMER'S TECHNICAL MATERIAL COMPANY

OAK MANUFACTURING CO. 1260 CLYBORN AVE., CHICAGO 10, ILL.

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

ENGINEERING OCT 7 1954

SW-155 \emptyset

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL

PROJECT NO.

ASS'Y. NO.

DATE

SPECIFICATIONS

1. Push rod length A-4 inches.
2. Key No. 1.
3. 6-32 tapped holes, both required.
4. Number of poles 4.
5. Contacts - non-shorting type.
6. Spring return (momentary) type.
7. Tropical finish.
8. 60° lug bend.

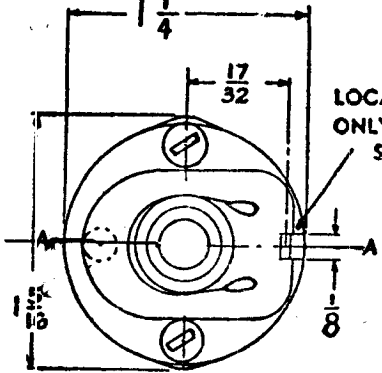
REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP.	
			MAMARONECK. NEW YORK	
STOCK SIZE				
			OAK TYPE 170 SLIDER SWITCH	
MATERIAL		WEIGHT PER PC.		
			G.T.O	
TYPE & TEMPER			DRAWN	MECH. DES. APP.
			ELEC. DES. APP.	
HEAT TREAT. SPEC.			CHECKED	
			FINAL APPROVAL	
FINISH & SPEC. NO.			SW-155 \emptyset	

7	ORIGINAL RELEASE		9/16/54	D.			
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
TOLERANCES			SCALE				
ALL OTHERS		DEC. DIM. \pm FRAC. DIM. \pm ANGULAR DIM. \pm	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.				

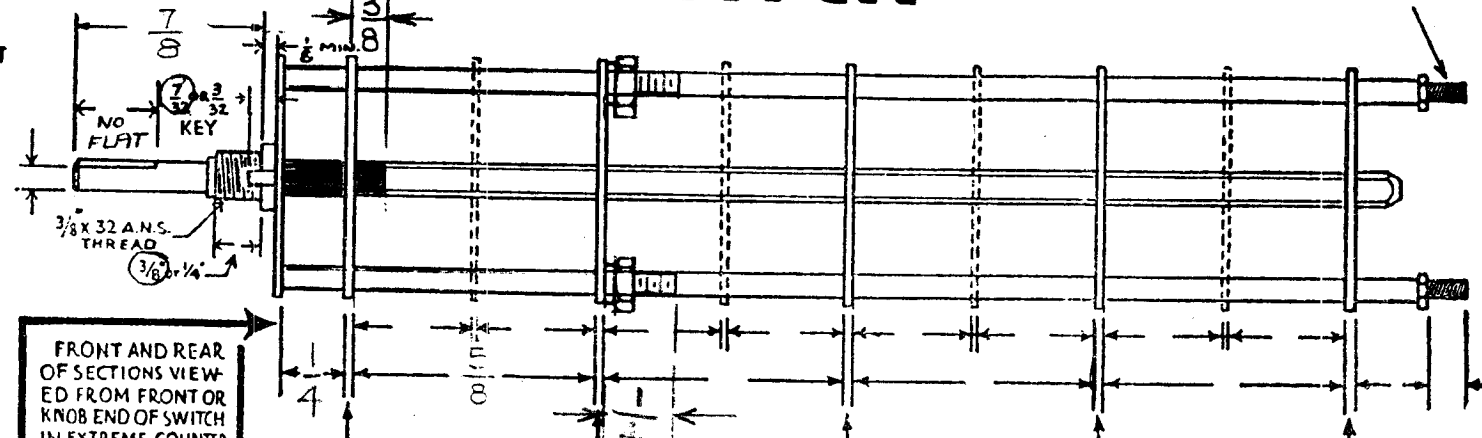
CUSTOMER'S DRAWING PART NO. THE TECHNICAL MFG. CO. CUSTOMER OAK MFG. CO. 1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE F SWITCH

SW-156-B 4-40 THREAD



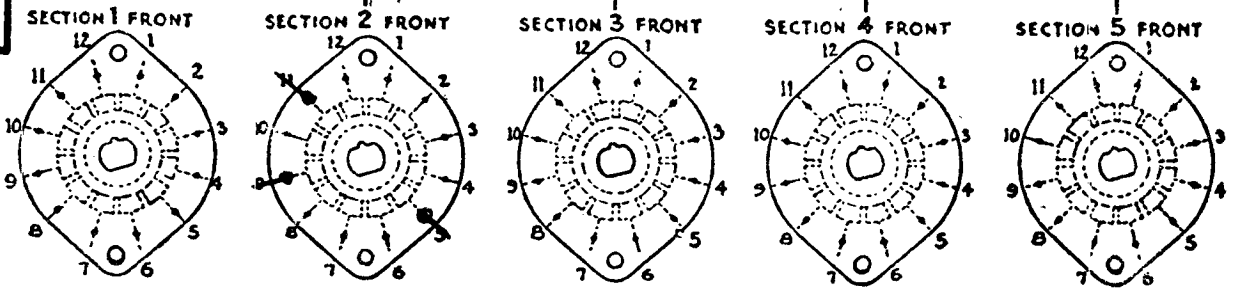
LOCATING KEY ONLY AT POINT SHOWN



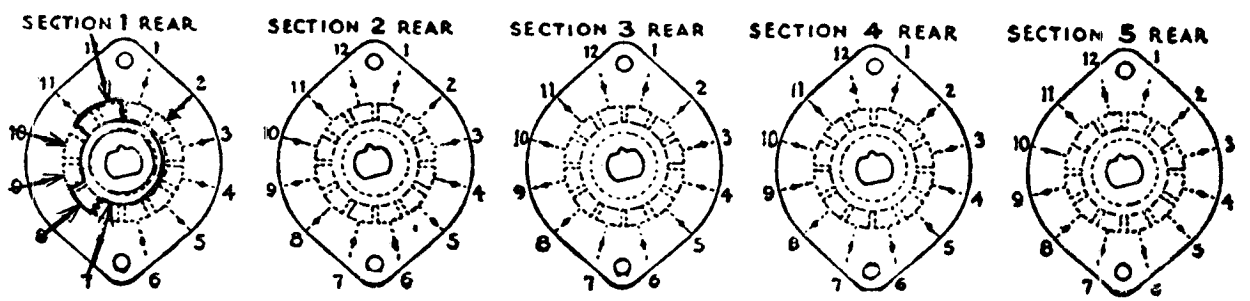
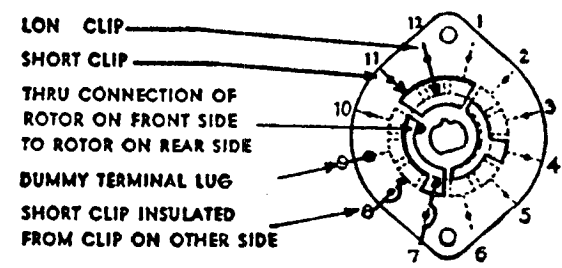
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. ± 3° STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 2
 NUMBER OF POSITIONS 3
 ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

ISSUE A - 1/2 CONTACT ADDED 1/22/66
 ISSUE B - DIM. 5/8 WAS 3/4 - 8-1-66 16679 RME

CUSTOMER NOTES

SW-156-B
 GPR-297
 AUDIO SELECTIVITY
 P.L.K. G.T.O.
 #1- WOC DATE 11/12/54

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE MYCALEX SPECIFY IMPREGNATION IF REQUIRED
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS)
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 3/8" - 32 NUTS Y2 ACROSS FLATS; MATERIAL BR. PLATING NK
 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL BR. PLATING NK
 STAMP PART NUMBER SW156 ON FRONT PLATE, YES NO

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

SW-162 D

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT

USED ON

MODEL

PROJECT NO.

ASS'Y. NO.

DATE

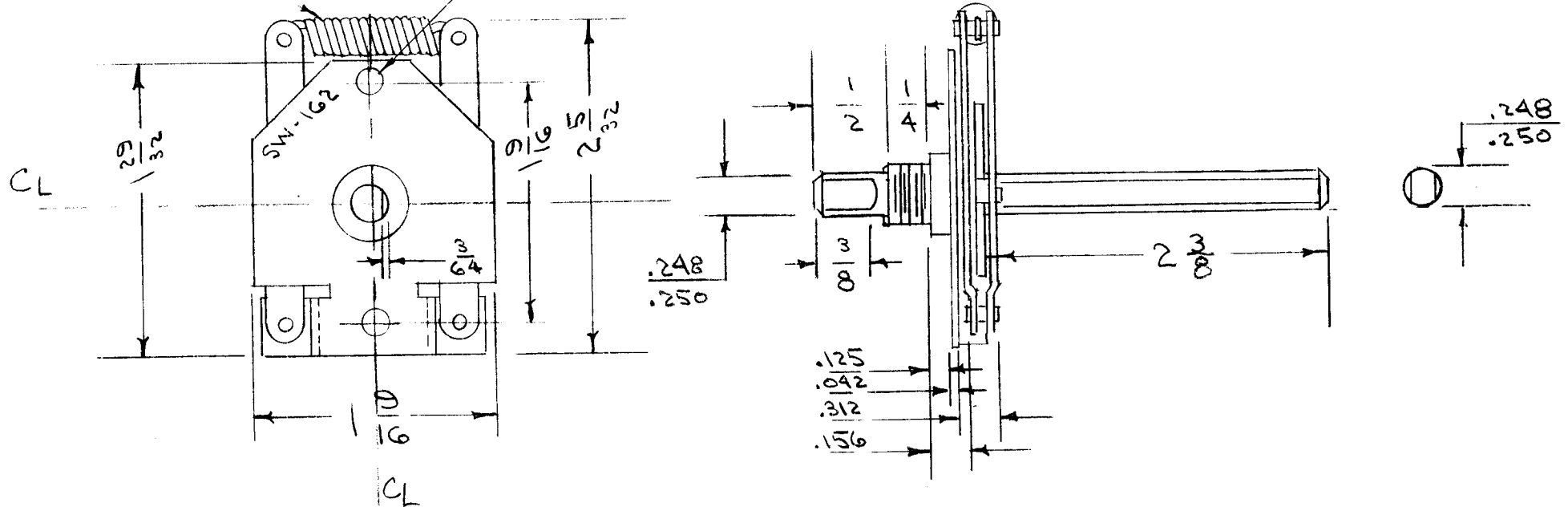
1

GPR-90

5-12-58

CENTRALAB P-5185

$\frac{9}{64}$ (.140) D.
2 HOLES



NO STOPS NECESSARY

DIM. FOR REF. ONLY
FLATTED SHAFT SHOWN IN SWITCH POSITION #1
6 POSITIONS AT 60° EACH

REF: CENTRALAB TYPE G INDEX

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP.	
STOCK SIZE			MAMARONECK. NEW YORK	
STEEL			SWITCH INDEX	
MATERIAL		WEIGHT PER PC.		
TYPE & TEMPER			CDD 3-28-SS	###
HEAT TREAT. SPEC.			DRAWN	ELEC. DES. APP.
FINISH & SPEC. NO.			MECH. DES. APP.	
			G.T.O.	
			CHECKED	
			FINAL APPROVAL	
			SW-162 D	

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
D	1	2 3/8 WAS 2 1/2	12/8/55	4	JAL	CS	WJ
C	1	9/64 HOLES WERE Y8	11/14/55	3	JAL	CS	WJ
B	1	2 1/2 WAS 2 1/4	7/19/55	2	JAL	CS	WJ
A	1	SPRING NO. P-5185 ADDED	6-15-55	1	JAL	CS	WJ

TOLERANCES

SCALE

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

ALL OTHERS

DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

STANDARD DRAWING

SW-163 A

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT

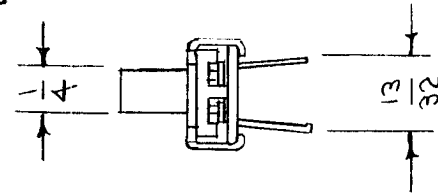
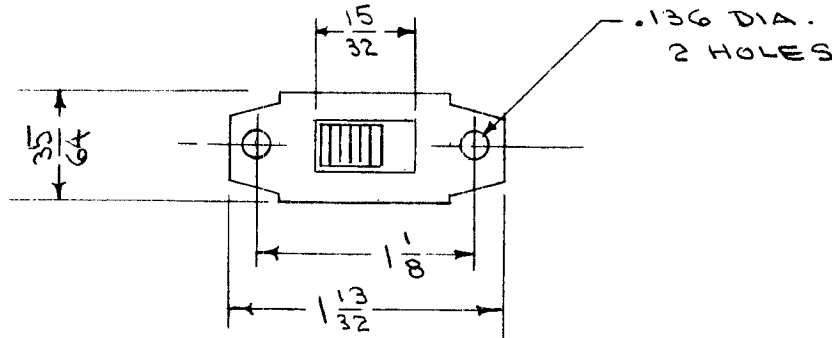
USED ON

MODEL

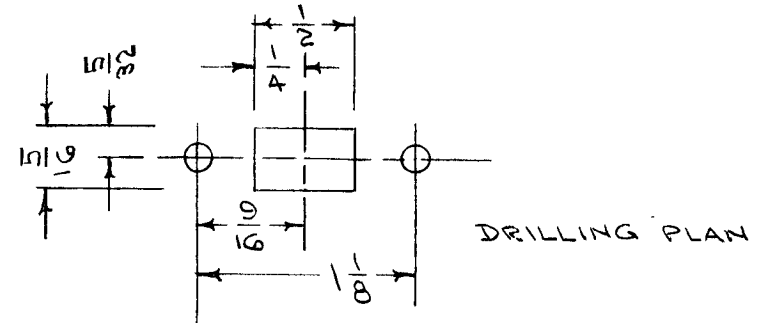
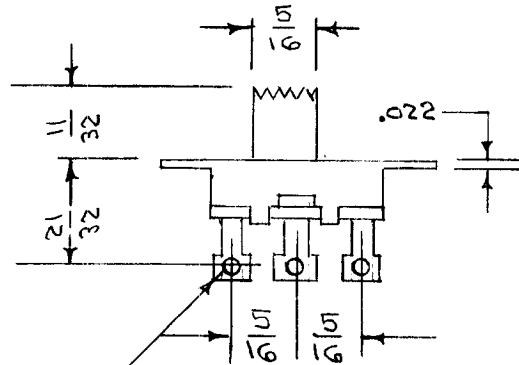
PROJECT NO.

ASS'Y. NO.

DATE



DP-DT
RATED -.50A-
125V
AC-DC



.076 DIA.

DIMENSIONS FOR REF. ONLY.

REF. STACKPOLE CAT. # SS-50

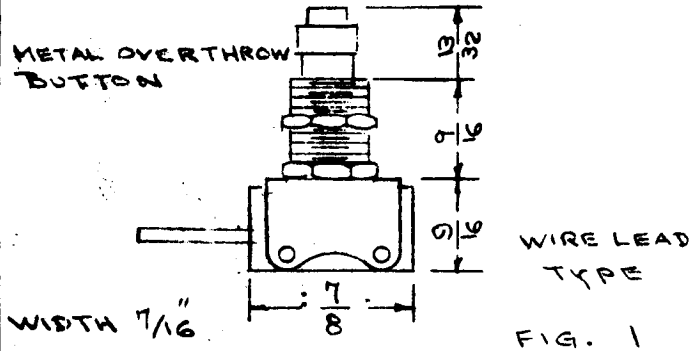
REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP.	
STOCK SIZE			MAMARONECK. NEW YORK	
			SWITCH, SLIDING	
MATERIAL		WEIGHT PER PC.		
TYPE & TEMPER			COO. A-12-55	<i>WJC</i>
HEAT TREAT. SPEC.			<i>WJC</i>	G.T. J
FINISH & SPEC. NO.			CHECKED	FINAL APPROVAL
			SW-163 A	

A	1	REF. WAS WIRT #SW726	12/4/55	1	JAWB	COO.	WJC
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES		SCALE
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

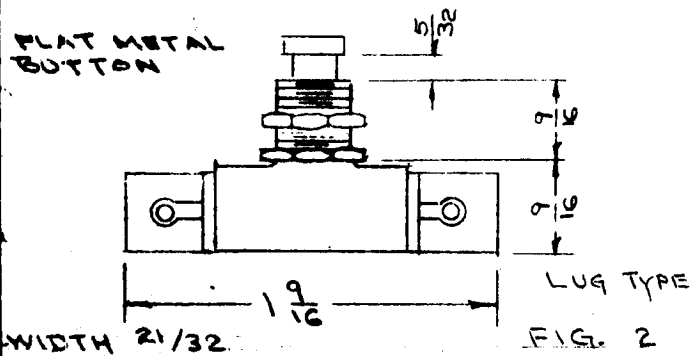
STANDARD DRAWING

PER UNIT	USED ON		DATE	SW-168	C
	M DEL	ASSY. NO.			



CIRCUITS	
SPST	Single Pole-Single Throw
DPST	Double Pole-Single Throw
SPDT	Single Pole-Double Throw
DPDT	Double Pole-Double Throw

CONTACT		
1	Wire Leads	Fig. 1
2	Solder Lugs	Fig. 2
3	Screw	Fig. 3



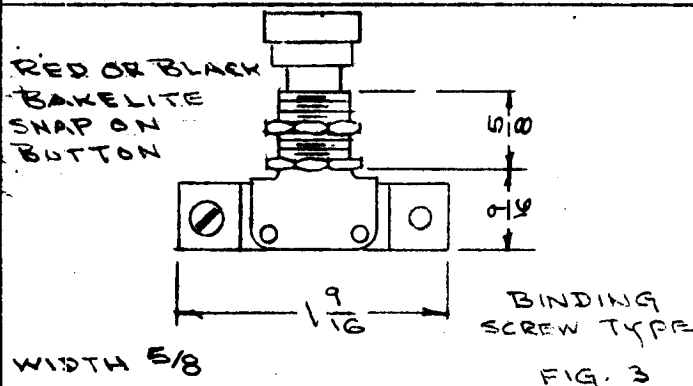
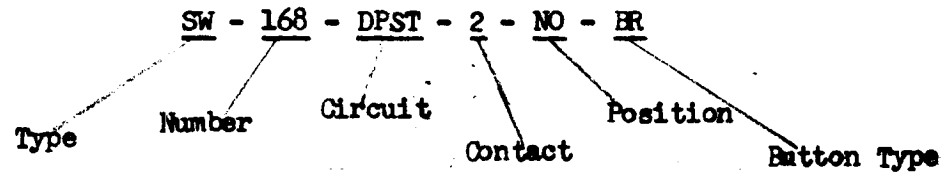
POSITION	
NO	Normally Open
NC	Normally Closed

BUTTON TYPE	
ER	Red Bakelite Snap on Button
BB	Black Bakelite Snap on Button
M	Metal Button
W	Metal Overthrow Button

BASE: - Bakelite
 KEY WAY: - Required
 1 Ampere - 250 Volts
 3 Ampere - 125 Volts
 15/32x32 Thread on Sleeve

2 Hex Nut
 Supplied By
 Manufacturer

Type Designation To Be In Following Form



NOTE: Adhere to this drawing wherever possible, special configuration available on Req.

Ref: Arrow-Hart & Hegeman Elec. Co. Series 359----

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL				
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK SWITCH, PUSH BUTTON MOMENTARY CONTACT					
		STOCK SIZE						
		MATERIAL						
C	1	REF: WAS TYPE 3592	10-19-62	7507	ES	<i>[Signature]</i>	<i>[Signature]</i>	
B	1	DPST-WAS-DPDT (TYPE DESIGNATION)	9-10-62	7206	SG	<i>[Signature]</i>	<i>[Signature]</i>	
A		REDRAWN WITH PICTORIAL CLARIFICATION	5/2/56	1	<i>[Signature]</i>	<i>[Signature]</i>	A.J.J.	
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	
TOLERANCES			SCALE:					
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES					
FRAC. DIM. ±								
ANGULAR DIM. ±								
TYPE & TEMPER			HEAT TREAT. SPEC.		DRAWN		CHECKED	
FINISH & SPEC. NO.			ELEC. DES. APP.		MECH. DES. APP.		SW-168	
							C	

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

STANDARD DRAWING

SW-169

REQ. PER UNIT

USED ON

MODEL

PROJECT NO.

ASS'Y. NO.

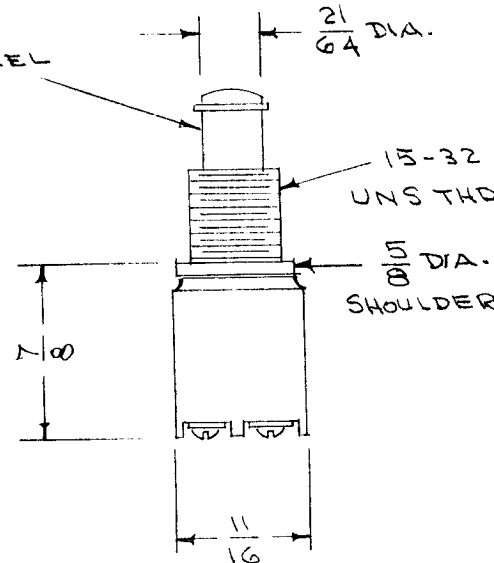
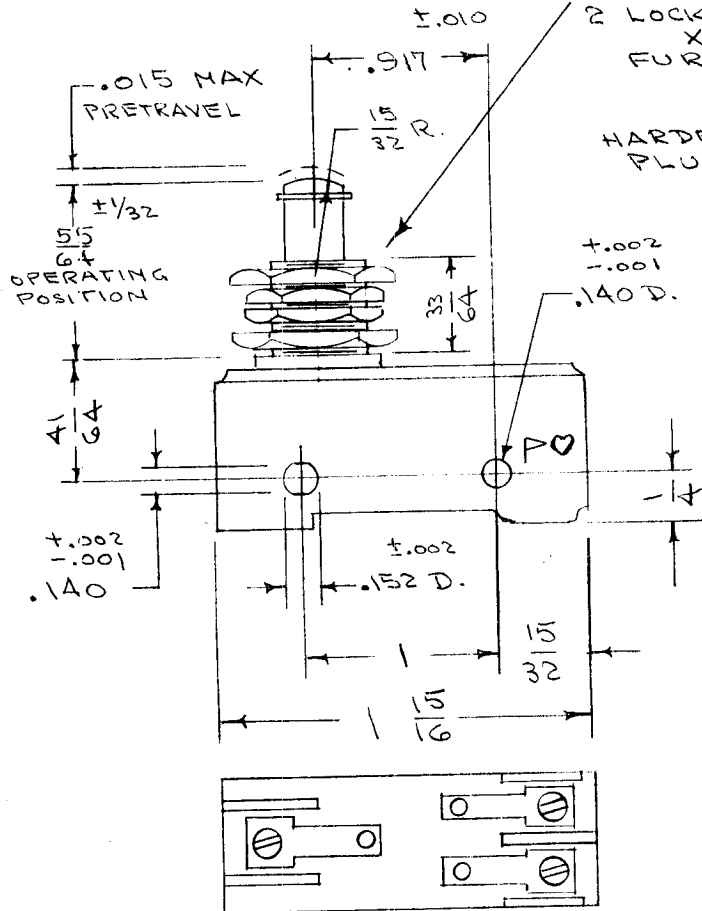
DATE

2 HEX NUTS 9/16 ACROSS FLATS
X 5/64 THK.
2 LOCK NUTS 5/8 ACROSS FLATS
X 5/64 THK.
FURNISHED

HARDENED STEEL
PLUNGER

SINGLE POLE OVERTHROW

OPER. FORCE - 9 TO 13 OZ.
RELEASE " - 4 OZ. MIN.
OVERTRAVEL - 7/32" MAX.
DIFF. TRAVEL - .0004" TO .002"
15A - 125, 250 OR 460 V AC
1/2A - 125 V DC
1/4A - 250 V DC



NOTICE TO PERSONS RECEIVING THIS DRAWING

THE TECHNICAL MATERIEL CORPORATION has proprietary right in the material disclosed herein. This drawing is for your confidence and should not be reproduced or used in any way without the written consent of THE TECHNICAL MATERIEL CORPORATION. It is to be used only for the purpose for which assistance and information is given at any time.

Property of:

THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, NEW YORK

SOLDER LUG TERMINALS

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE	SWITCH, PLUNGER	
		MATERIAL	WEIGHT PER PC.	
		TYPE & TEMPER		
		HEAT TREAT. SPEC.		
		FINISH & SPEC. NO.		
			CDP ELEC. DES. APP. A.J.J. MECH. DES. APP. B.B.	
			CHECKED FINAL APPROVAL	
			SW-169	

ISSUE ITEM CHANGED FROM DATE CN. NO. DRAFTS CHECKER ENG. APP.

TOLERANCES

SCALE 5401-54 (BZ-2RQ1)

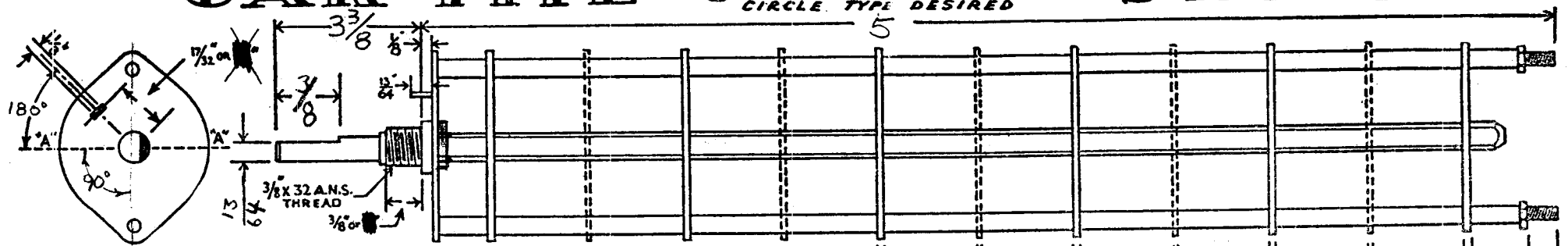
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

ALL OTHERS
DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

OAK TYPE (H, HC, DH, DHC, QH, GDH, QHC, ODHC,) SWITCH

CIRCLE TYPE DESIRED

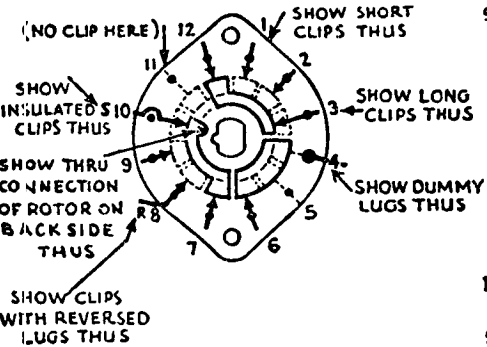
CUSTOMER'S PART NO. SW-171



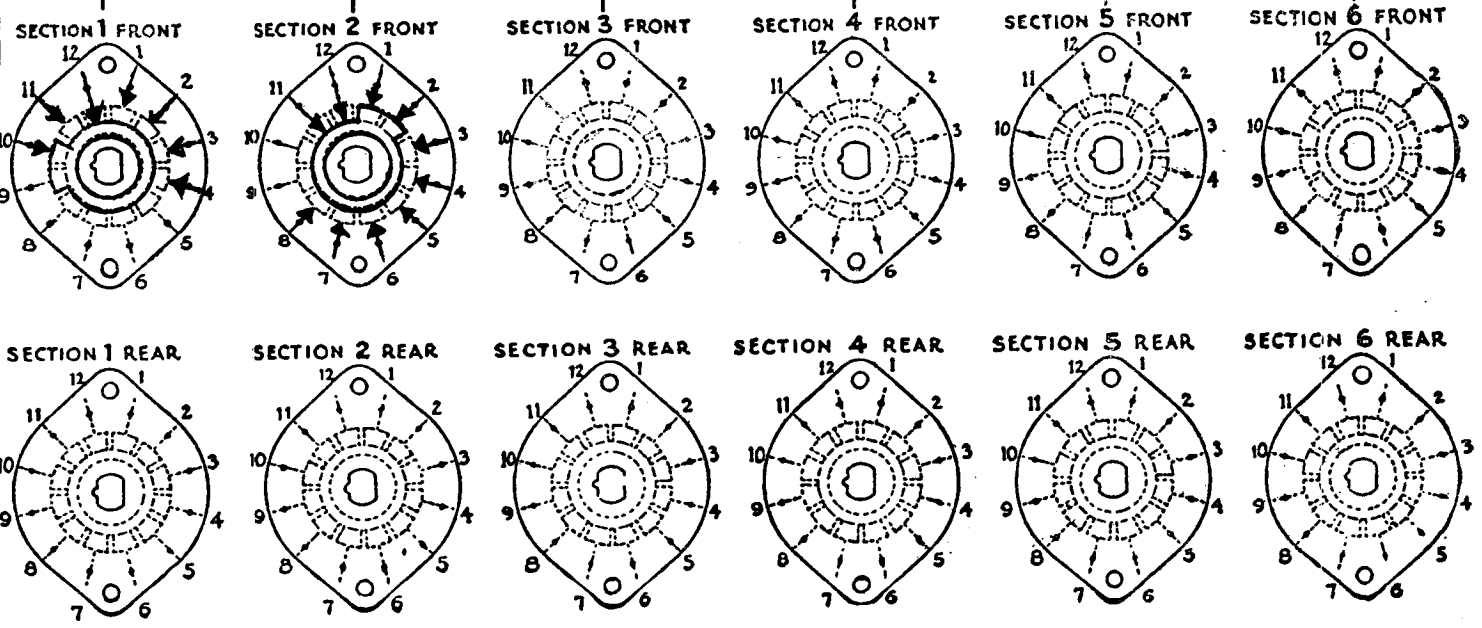
DRAW IN FLAT ON ABOVE SHAFT IN EXTREME COUNTER CLOCKWISE POSITION AND SHOW ANGLE IN REFERENCE TO LINE "A-A"

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

TOTAL NO. OF SECTIONS 2
 NO. OF POSITIONS NO DETENT



OUTLINE ROTOR BLADES AS ABOVE IN EXTREME COUNTER-CLOCKWISE (LEFT) POSITION



FILL IN ALL DIMENSIONS INDICATED ABOVE AND CHECK ALL SPECIFICATIONS BELOW. REFER TO OAK ENGINEERING DATA SHEETS FOR STANDARD DIMENSIONS OF TYPE DESIRED AND FOR SPECIMEN OF THIS LAYOUT SHEET. TO OBTAIN MOST ECONOMICAL UNITS AND SHORTEST DELIVERY DATES PLEASE ADHERE TO THE STANDARDS AS CLOSELY AS POSSIBLE.

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE ; CERAMIC SPECIFY IMPREGNATION IF REQUIRED
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) _____
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY _____ 3/8" - 32 NUTS _____ ACROSS FLATS; MATERIAL _____ PLATING _____
 _____ 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____

STAMP PART NUMBER SW 171 ON FRONT PLATE, YES NO
 (NUMBER)

CUSTOMER NOTES

SECTION 1 + 2 CERAMIC HC TYPE WAFER
 NO DETENT
 SHAFT NOT REMOVABLE

MULTIPLIER, BAND SWITCH S-201			
THE TECHNICAL MATERIEL CORP. MAHARONECK, NEW YORK.			
JA De	CSB	SW-171	B
DRAWN	CHECKED		
ALP	A. J. J.		
ELEC DES	APPROVAL		

(RTF) (RTF-2) NO. OF SECTIONS WAS 3

OAK MFG. CO.

1260 CLYBORN AVE, CHICAGO 10, ILL.

CUSTOMERS SW-173
PART NO.

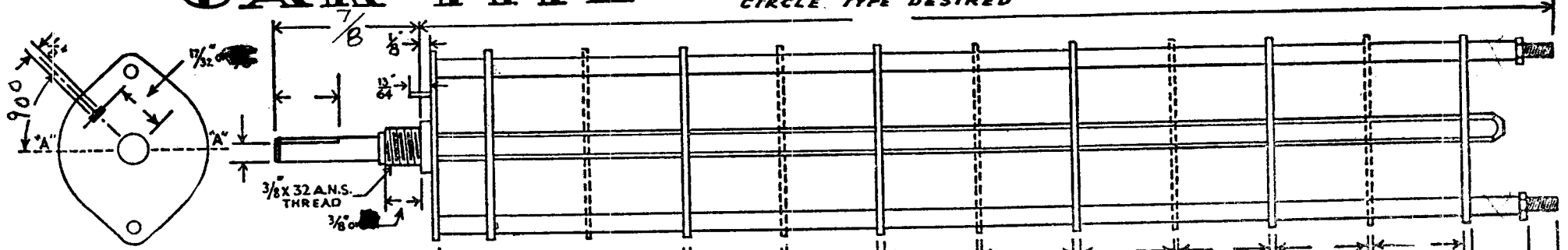
THE TECHNICAL MATERIEL CORPORATION

OAK MFG. CO.

1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE (H, HC, DH, DHC, QH, QDH, QHC, QDHC.) SWITCH

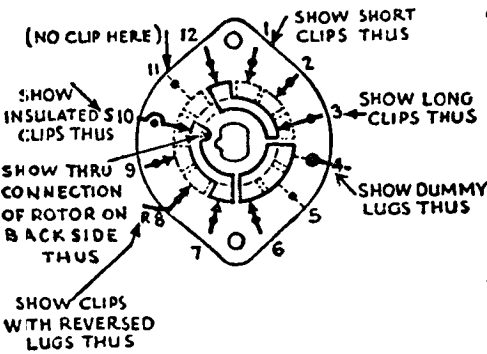
CIRCLE TYPE DESIRED



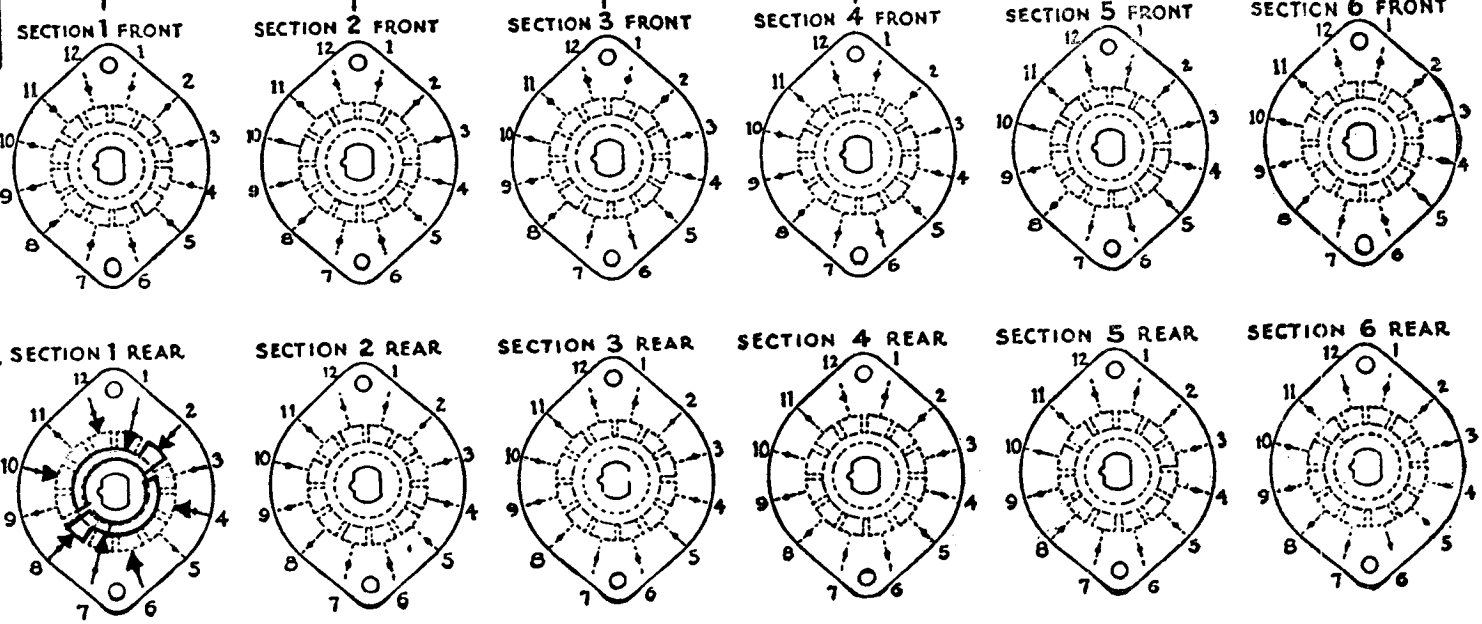
DRAW IN FLAT ON ABOVE SHAFT IN EXTREME COUNTER CLOCKWISE POSITION AND SHOW ANGLE IN REFERENCE TO LINE "A-A"

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

TOTAL NO. OF SECTIONS _____
NO. OF POSITIONS 3



OUTLINE ROTOR BLADES AS ABOVE IN EXTREME COUNTER-CLOCKWISE (LEFT) POSITION



FILL IN ALL DIMENSIONS INDICATED ABOVE AND CHECK ALL SPECIFICATIONS BELOW. REFER TO OAK ENGINEERING DATA SHEETS FOR STANDARD DIMENSIONS OF TYPE DESIRED AND FOR SPECIMEN OF THIS LAYOUT SHEET. TO OBTAIN MOST ECONOMICAL UNITS AND SHORTEST DELIVERY DATES PLEASE ADHERE TO THE STANDARDS AS CLOSELY AS POSSIBLE.

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE ; CERAMIC SPECIFY IMPREGNATION IF REQUIRED _____
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS) _____
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY _____ $\frac{3}{8}$ " - 32 NUTS _____ ACROSS FLATS; MATERIAL _____ PLATING _____
 _____ $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____

STAMP PART NUMBER SW-173 ON FRONT PLATE, YES NO
(NUMBER)

(RTF)

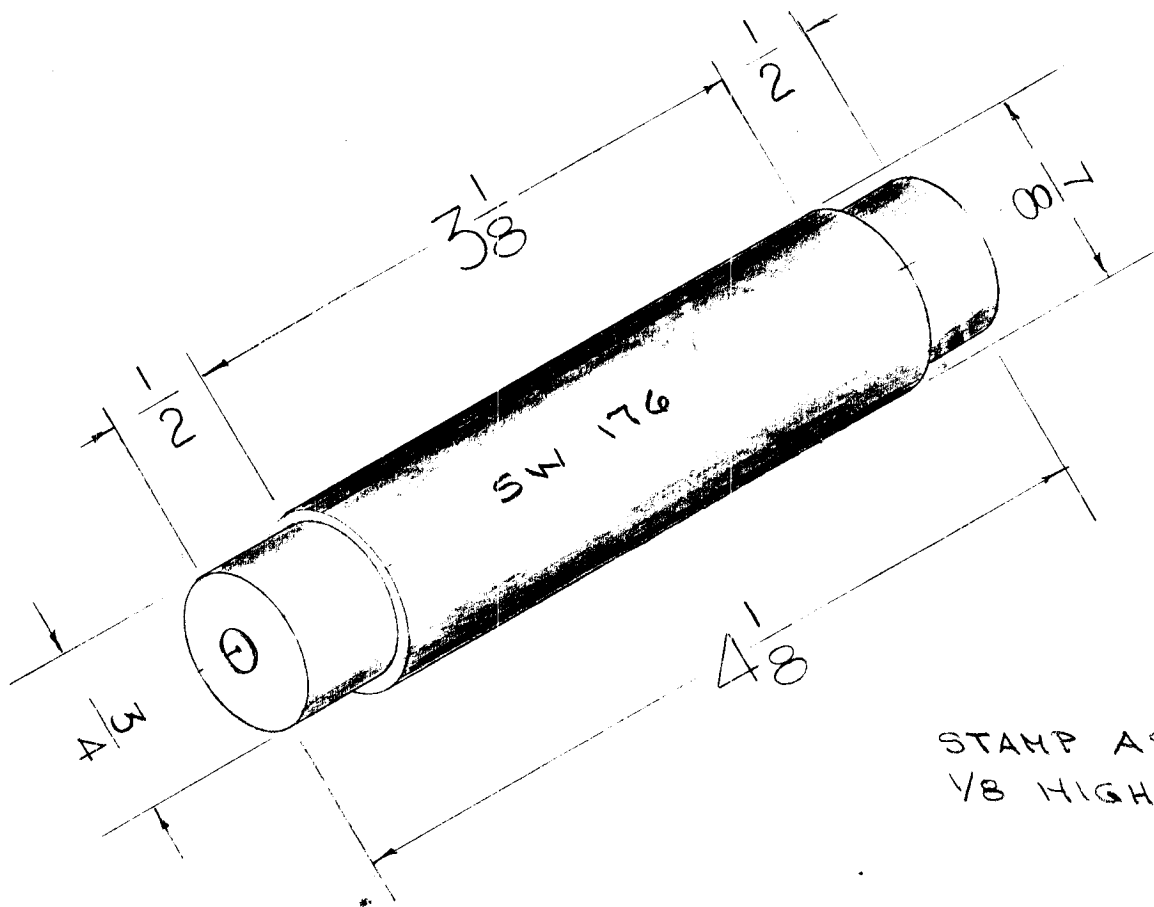
CUSTOMER NOTES

DETENT: 60°

		HAS "H" TYPE			
A	11/16/55	SEC. 1 REAR CLARIFIED	BY	A.J.J.	
SYM	DATE	DESCRIPTION	CHKD	APP	
METER SWITCH S-203					
THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK					
DRAWN		CHECKED		SW-173 A	
O.J.P.		A.J.J.			
ELEC. DES		APPROVAL			

REQ. PER UNIT	USED ON		
	MODEL	ASS'Y. N.	DATE
2	RAC-30	A-1122	11/3/55
2	RAC-30A	A-1176	2/6/56

SW-176



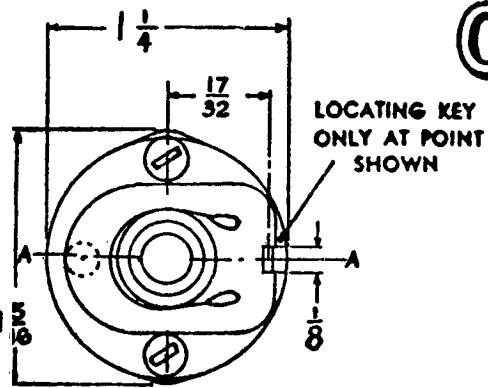
STAMP AS SHOWN
1/8 HIGH BLACK GOTHIC

								REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
										THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK		
								STOCK SIZE			LIGHTNING ARRESTOR	
								MATERIAL				
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL		DRAWN	CHECKED	FINAL APPROVAL
TOLERANCES			SCALE:		A-1131					PC	FAW	ARB
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.		TYPE & TEMPER		HEAT TREAT. SPEC.	DRAWN		CHECKED		FINAL APPROVAL
FRAC. DIM. ±			REMOVE ALL BURRS AND SHARP EDGES									SW-176
ANGULAR DIM. ±					FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.				

SW-177

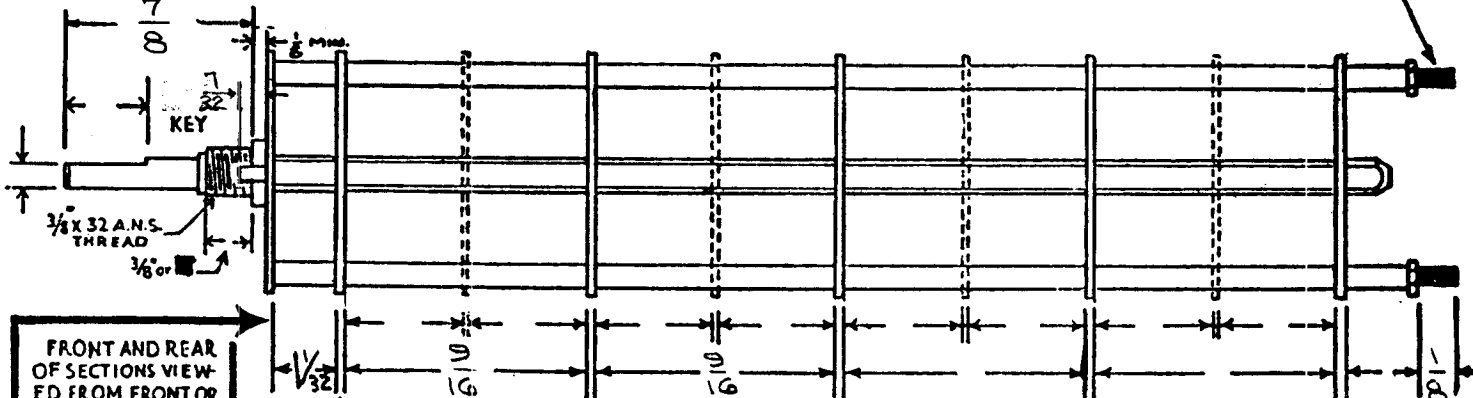
OAK TYPE F SWITCH

CUSTOMER'S PART NO. SW-177



LOCATING KEY ONLY AT POINT SHOWN

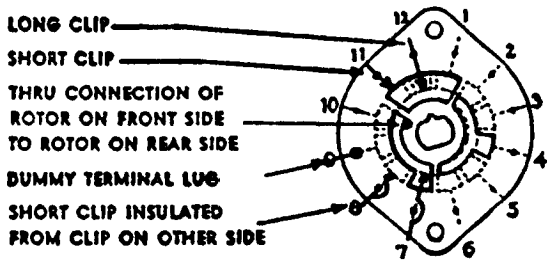
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE



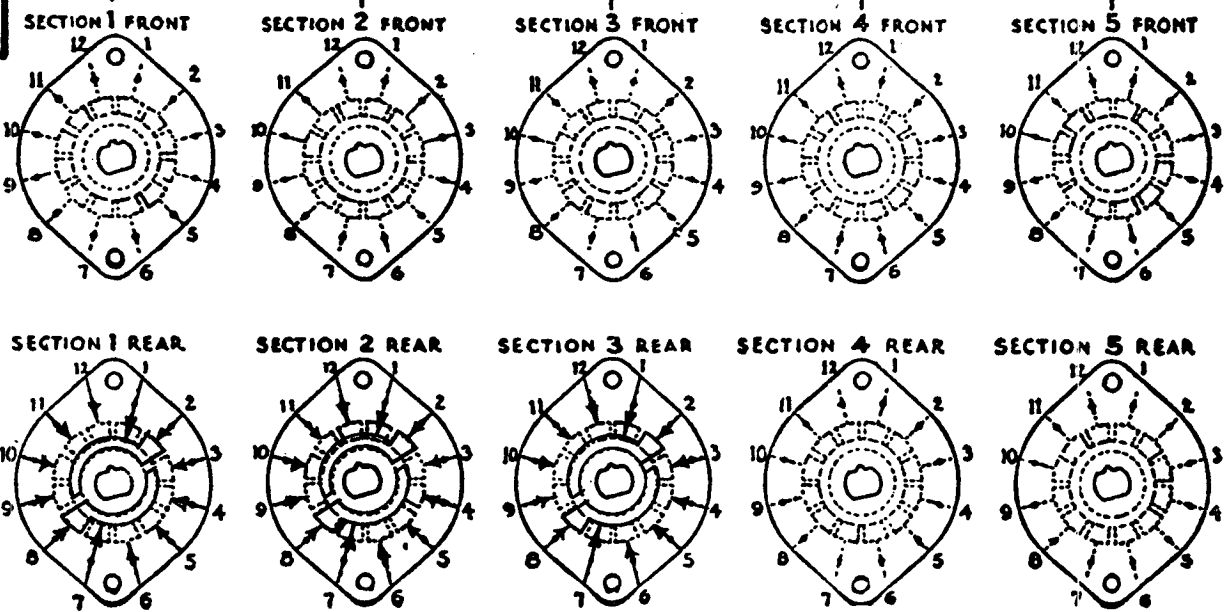
FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{3}{0113}$
 NUMBER OF POSITIONS $\frac{12}{0113}$
 ANGLE OF THROW 30° (30° OR \square)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



CUSTOMER NOTES

FUNCTION SWITCH	
MODEL 2110	
THE TECHNICAL MATERIAL CORPORATION	
MAMARONECK, NEW YORK	
DATE 11-29-55	CHKD. 2. B
DRAWN <i>ewb</i>	APPD. A. J. J.
SHEET 1 OF 1	NO. SW-177

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS)
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY $\frac{3}{16}$ " - 32 NUTS _____ ACROSS FLATS; MATERIAL _____ PLATING _____
 $\frac{3}{16}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL _____ PLATING _____
 STAMP PART NUMBER SW-177 ON FRONT PLATE, YES NO
 (NUMBER)

CUSTOMER

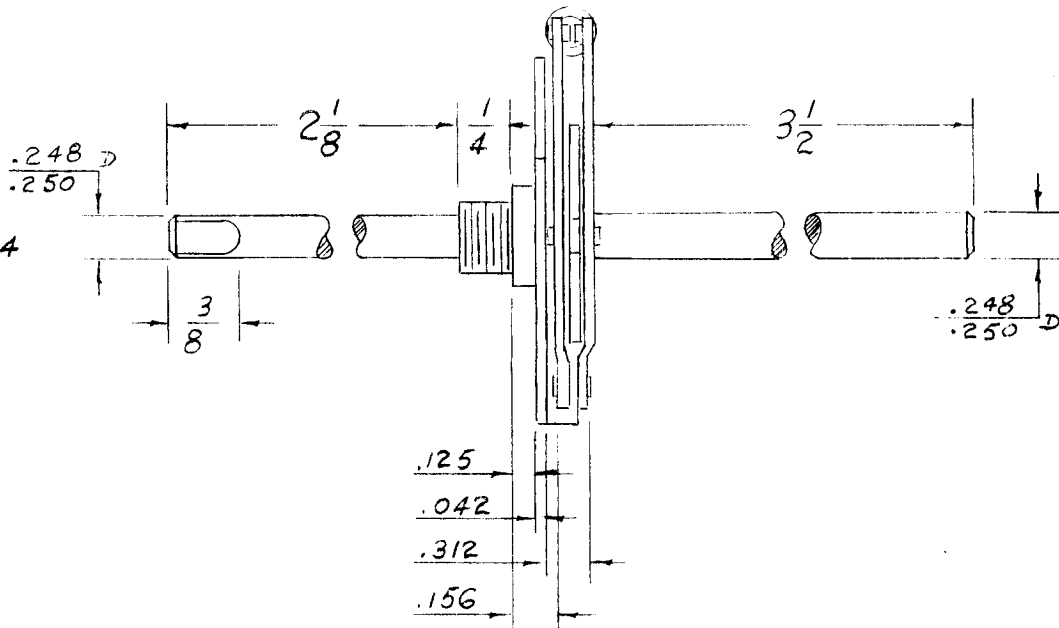
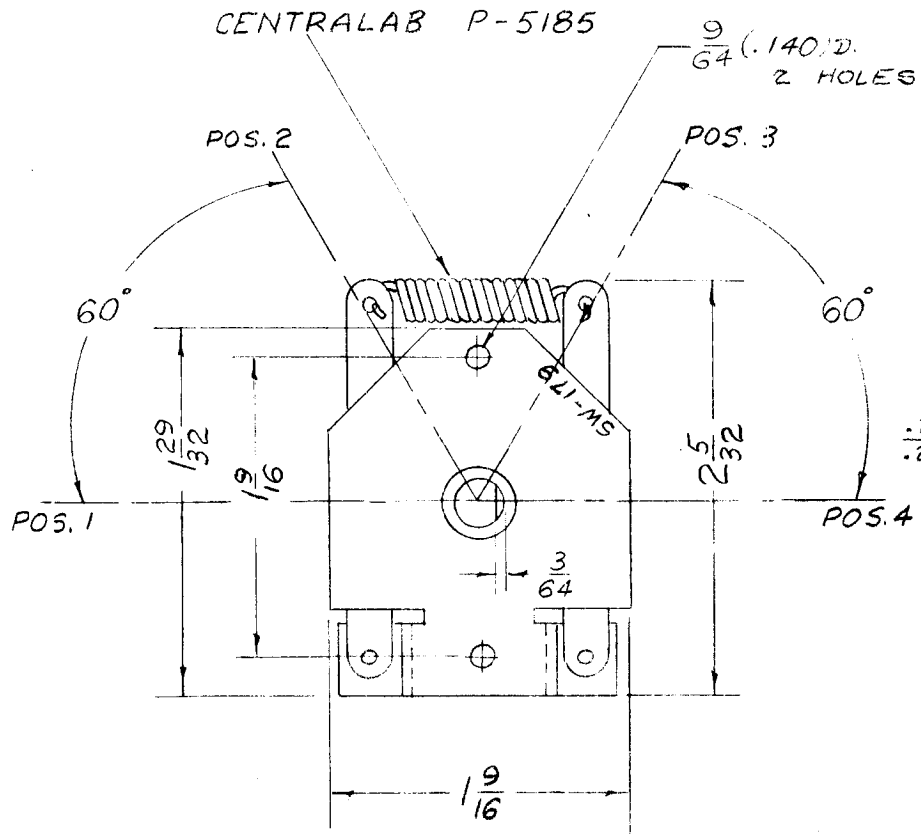
OAK MFG. CO.

1260 CLYBOURN AVE., CHICAGO 10, ILL.

REQ. PER UNIT	USED ON		
	MODEL	ASS'Y. NO.	DATE
1	RTF		1-20-56
1	RTF-2	MULT	11-20-58

SW-179

A



NOTE:

POSITIONS & STOP ARRANGEMENT
4 POS. 60° CLOVER LEAF INDEX.

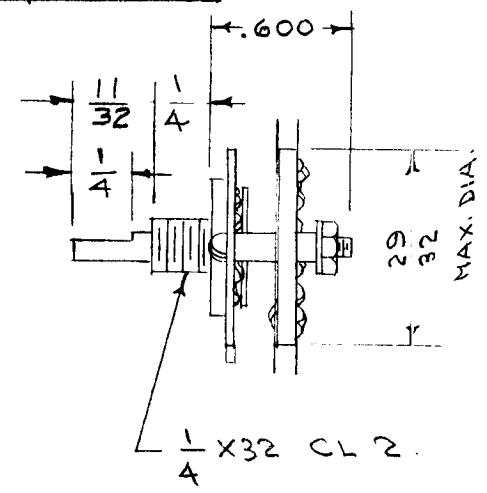
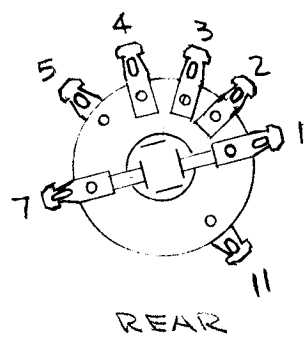
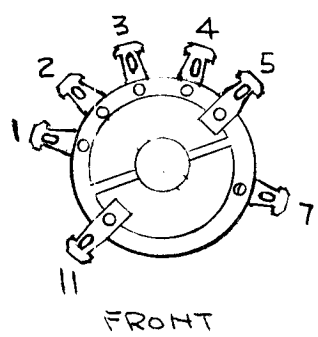
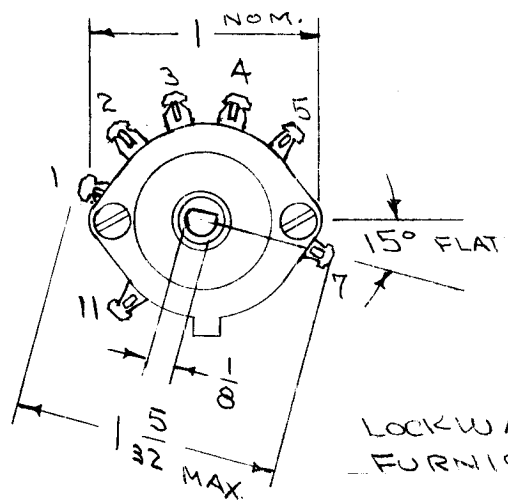
REF. CENTRALAB TYPE G INDEX.

REQ.	ITEM	PART NO.	DESCRIPTION				SYMBOL
			THE TECHNICAL MATERIEL CORP.				
			MAMARONECK, NEW YORK				
			STOCK SIZE				
			STEEL				
			MATERIAL				
A	1	9/64 D. WAS 1/8	3-2-56	1	PS	JANDE	WDC
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
TOLERANCES			SCALE: #				
DEC. DIM. ± .005			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE F R REJECTION. REMOVE ALL BURRS AND SHARP EDGES				
FRAC. DIM. ± Y64							
ANGULAR DIM. ± Y2°							
TYPE & TEMPER		HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL		
S-105 CAD. PLATE			O.I.P.	WDC	SW-179		
FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.				

ANGLE OF THROW 30°
 NO OF POSITIONS 4, STOP AT 4th POS.
 CONTACTS & WIPERS - SILVER ALLOY
 INSULATION MATERIAL - GLASS MELAMINE LAMINATE

REQ. PER UNIT	USED ON		
	MODEL	ASS'Y. NO.	DATE
1	FFRD-1,2,3		3-22-56
2	SBE-2		5-5-58
2	SBE-3	AP-101	11-30-59

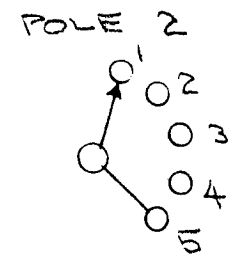
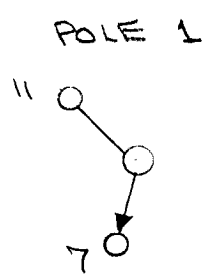
SW-181 D



LOCKWASHER, HEX NUT & SMALL KNOB FURNISHED WITH SWITCH.

CONTACT RESISTANCE - .015 Ω MAX.
 DIELECTRIC STRENGTH - 1000 V RMS MIN.
 INSULATION RESISTANCE - 100 meg Ω MIN.
 CURRENT CARRYING CAP. - 1 A. at 50V DC
 CURRENT BREAKING CAP. - 250 MA AT 50V DC. OR NON INDUCTIVE AC LOAD
 TORQUE - APPROX 1 1/2 IN/LBS.

CONTACTS - SHORTING
 NON TURN DEVICE - NONE



ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
D	2	LUGS CHG'D TO J-B-T TYPE	6-5-63	9134			
	1	INPL INST INC REF DELETED					
C	1	1 FLAT DELETED	9/16/57	3			
B	2	STOP CLARIFIED	2/27/57	2			
	1	FRONT VIEW CORRECTED					
A	1	MECHANICAL & INSUL. DATA ADDED	6/15/56	1			

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE	
		MATERIAL	
		SW-181	D

CUSTOMER'S PART NO. SN-184

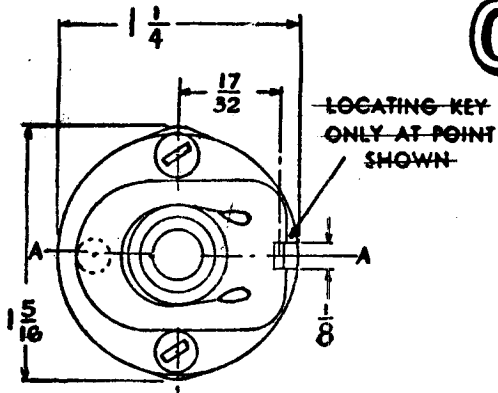
CUSTOMER

OAK MFG. CO.

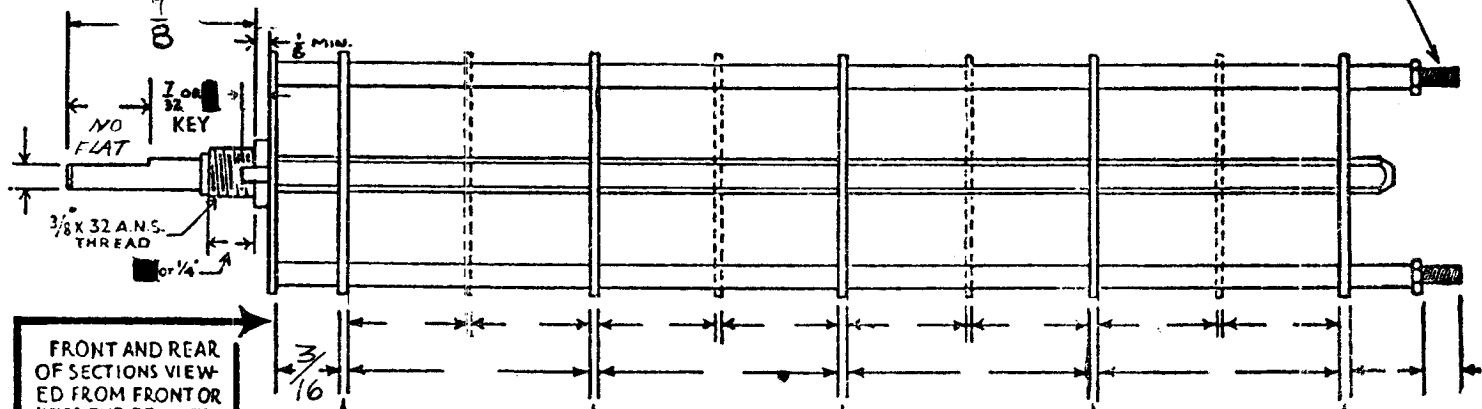
1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE F SWITCH

SW-184



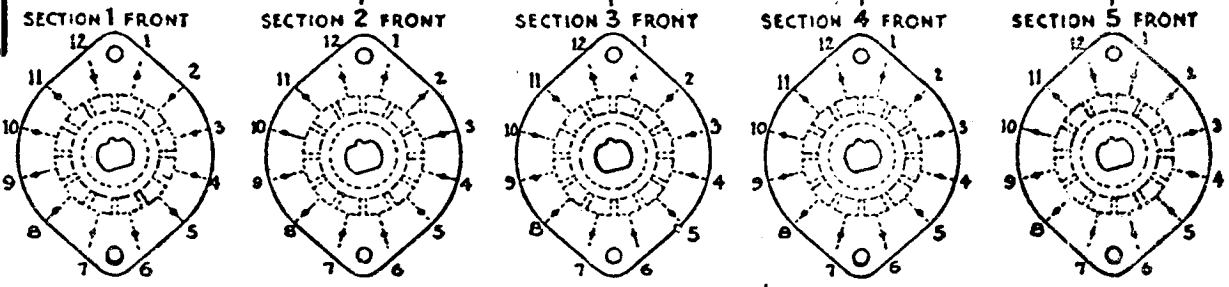
SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLLED AND SLOTTED SHAFT ALSO AVAILABLE



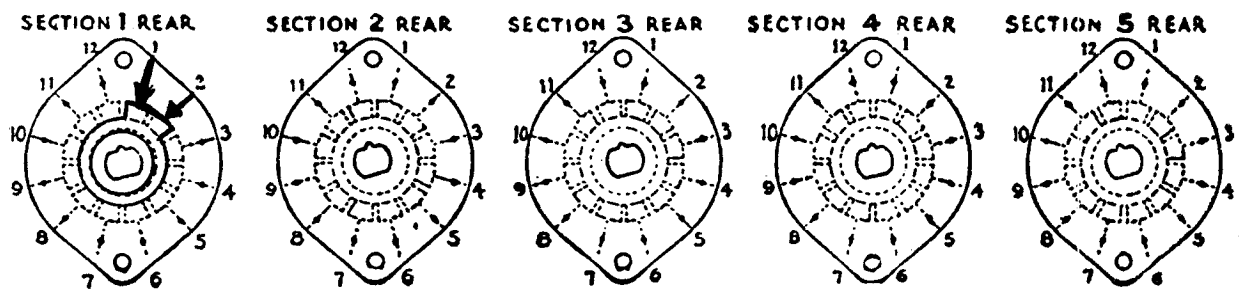
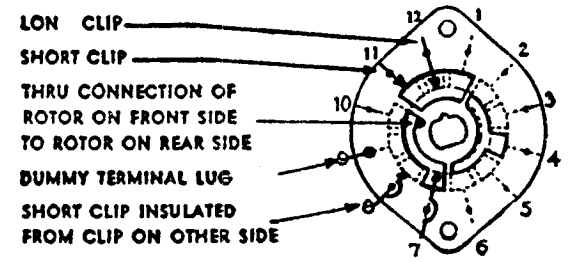
4-40 THREAD

FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 1
 NUMBER OF POSITIONS 2
 ANGLE OF THROW 30° (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



CUSTOMER NOTES

OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SYM	DESCRIPTION	DATE	CHK	APP
A	CONTACT Moved From 3-11/15/56 PLK	ATJ		

SWITCH, UPPER/LOWER SB.
 GSB-1

THE TECHNICAL MATERIAL CORPORATION
 MAMARONECK, NEW YORK

DATE 6-1-56 CHKD. HH
 DRAWN ... APPD. A.J.J.
 SHEET 1 OF 1 NO. SN-184 A

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: $\frac{1}{16}$ " BAKELITE ; $\frac{1}{8}$ " MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS).
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 $\frac{3}{8}$ " .32 NUTS 1/2 ACROSS FLATS; MATERIAL BR PLATING NK
1 $\frac{3}{8}$ " INTERNAL TOOTH LOCKWASHER; MATERIAL BR PLATING NK

STAMP PART NUMBER SW-184 ON FRONT PLATE, YES NO
 (NUMBER)

DATE _____

CUSTOMER'S SW-185
PART NO.

CUSTOMER

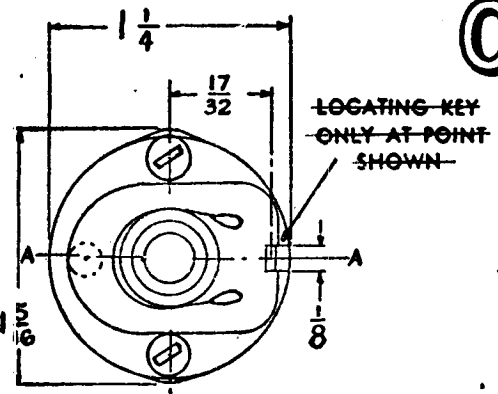
OAK MFG. CO.

1260 CLYBORN AVE., CHICAGO 10, ILL.

OAK TYPE F SWITCH

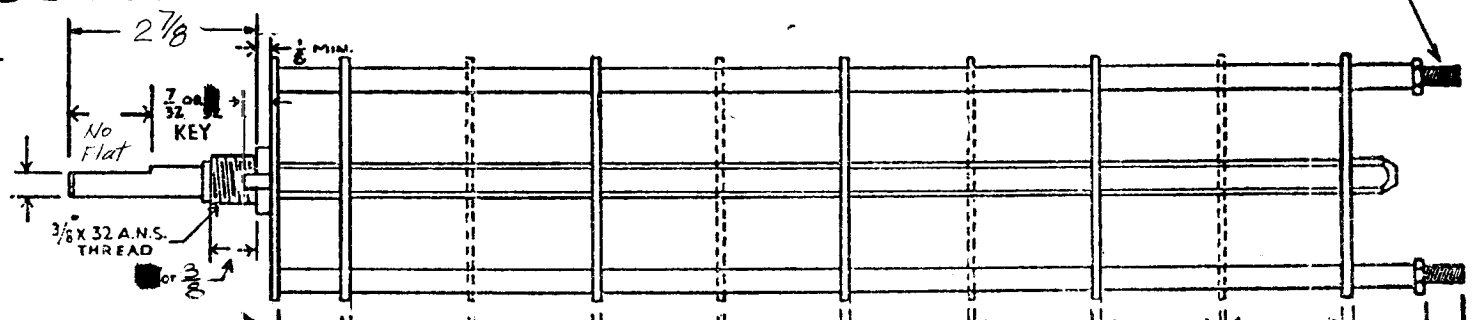
SW-185-A

4-40 THREAD



LOCATING KEY
ONLY AT POINT
SHOWN

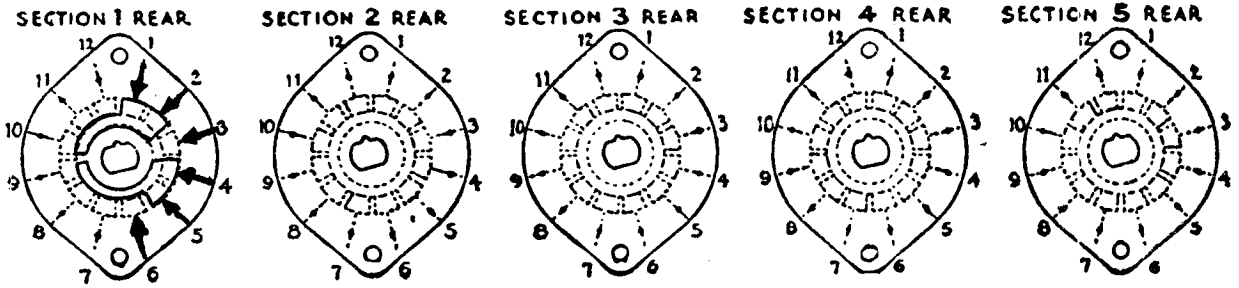
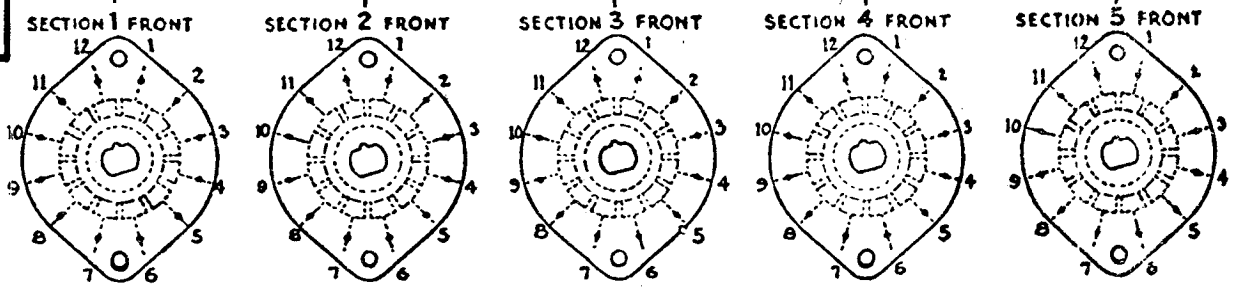
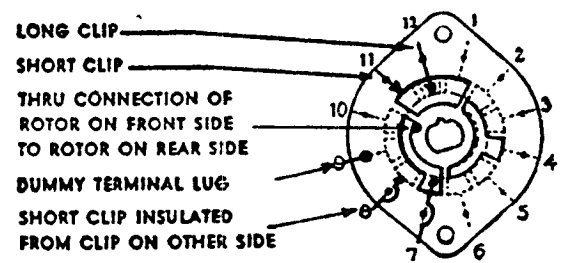
SHOW CUT AWAY PORTION
OF FLAT IN BLACK AND GIVE
ANGLE TO LINE A-A. $\pm 3^\circ$
STANDARD RMA KNURLED AND
SLOTTED SHAFT ALSO AVAILABLE



FRONT AND REAR
OF SECTIONS VIEWED
FROM FRONT OR
KNOB END OF SWITCH
IN EXTREME COUNTER-
CLOCKWISE POSITION

NUMBER OF SECTIONS $\frac{1}{2}$
NUMBER OF POSITIONS $\frac{2}{1}$
ANGLE OF THROW 30° (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH
SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
INSULATION: $\frac{1}{16}$ BAKELITE $\frac{1}{8}$ MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS).
CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
MOUNTING HARDWARE: SUPPLY $\frac{1}{2}$ 3/8" - 32 NUTS $\frac{1}{2}$ ACROSS FLATS; MATERIAL BR PLATING NK
 $\frac{1}{2}$ 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL BR PLATING NK
STAMP PART NUMBER SW-185-A ON FRONT PLATE, YES NO

CUSTOMER NOTES

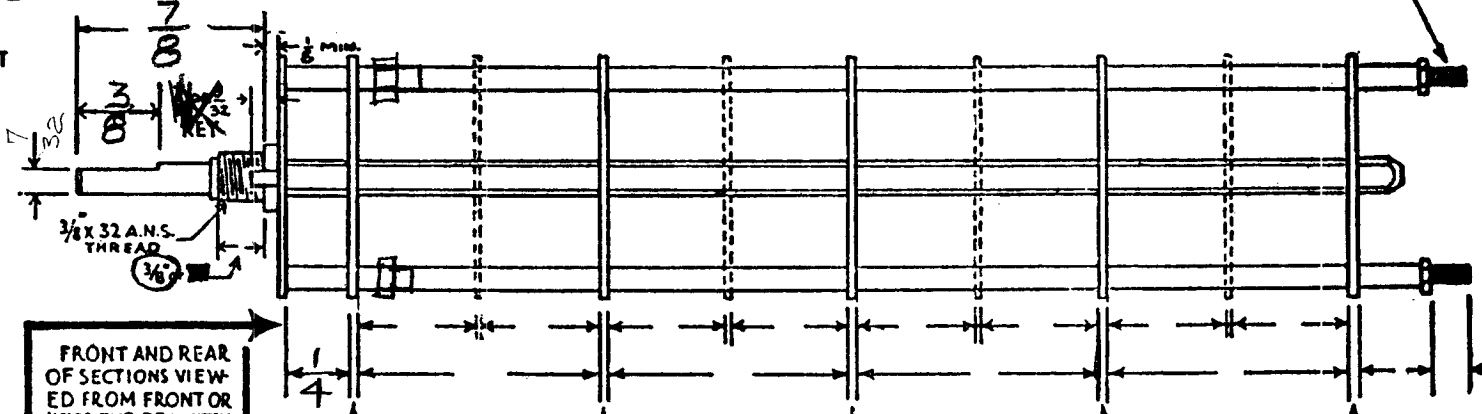
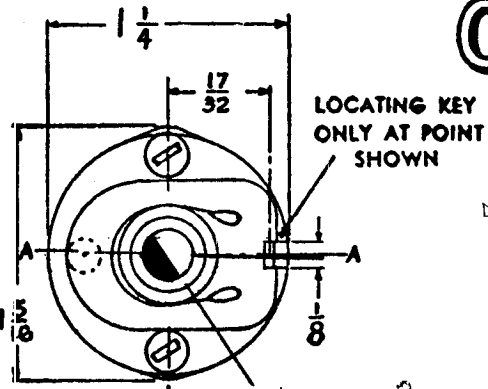
AM-SSB SSB-1	
THE TECHNICAL MATERIAL CORPORATION MAMARONECK, NEW YORK	
DATE 6-1-56	CHKD. H.H.
DRAWN [Signature]	APPD. A.J.J.
SHEET 1 OF 1	NO. SW-185 A

DATE _____

SW-193

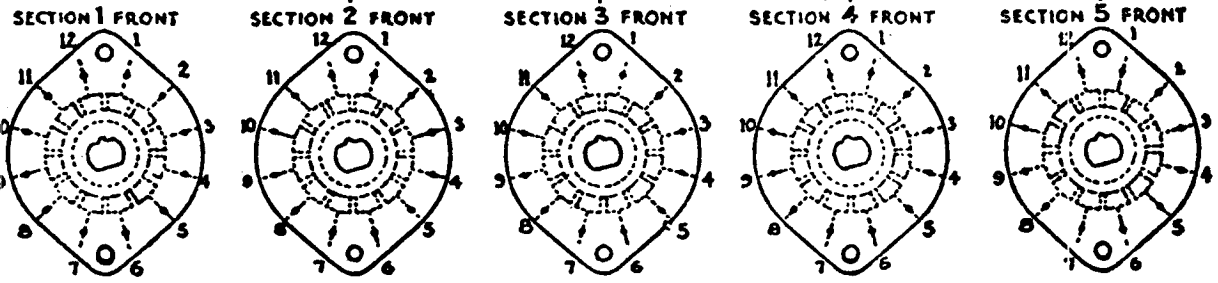
OAK TYPE F SWITCH

CUSTOMER'S SW-193
PART NO.

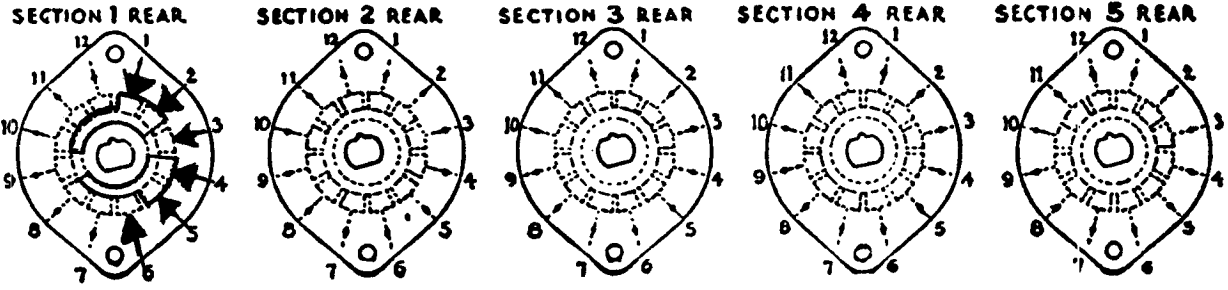
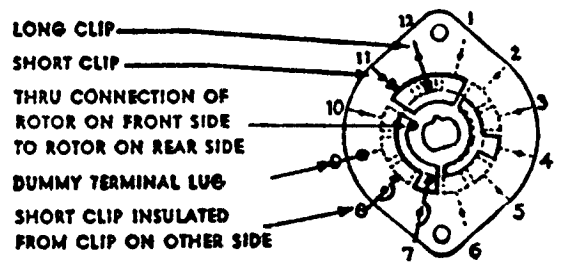


FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 1
 NUMBER OF POSITIONS 2
 ANGLE OF THROW 30 (30° OR 60°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ARMY NAVY SALT TEST (IF ANY GIVE DETAILS)
 CONTACTS AND ROTORS: SILVER PLATED BRASS SOLID SILVER ALLOY IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 3/8" .32 NUTS 2 ACROSS FLATS; MATERIAL B PLATING Ni
1 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL B PLATING Ni
 STAMP PART NUMBER SW-193 ON FRONT PLATE, YES NO

CUSTOMER NOTES

Model MSR

MANUAL - XTAL SW

THE TECHNICAL MATERIAL CORPORATION
MAMARONECK, NEW YORK

DATE <u>Feb 14, 1957</u>	CHKD. <u>P.L.K.</u>
DRAWN <u>P.L.K.</u>	APPD. <u>A.J.</u>
SHEET <u>OF</u>	NO. <u>SW-193</u>

CUSTOMER

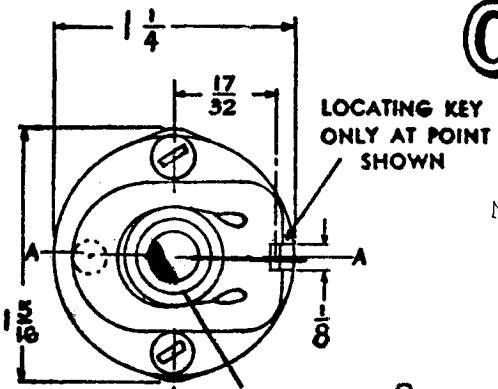
OAK MFG. CO.

1260 CLYBOURN AVE., CHICAGO 10, ILL.

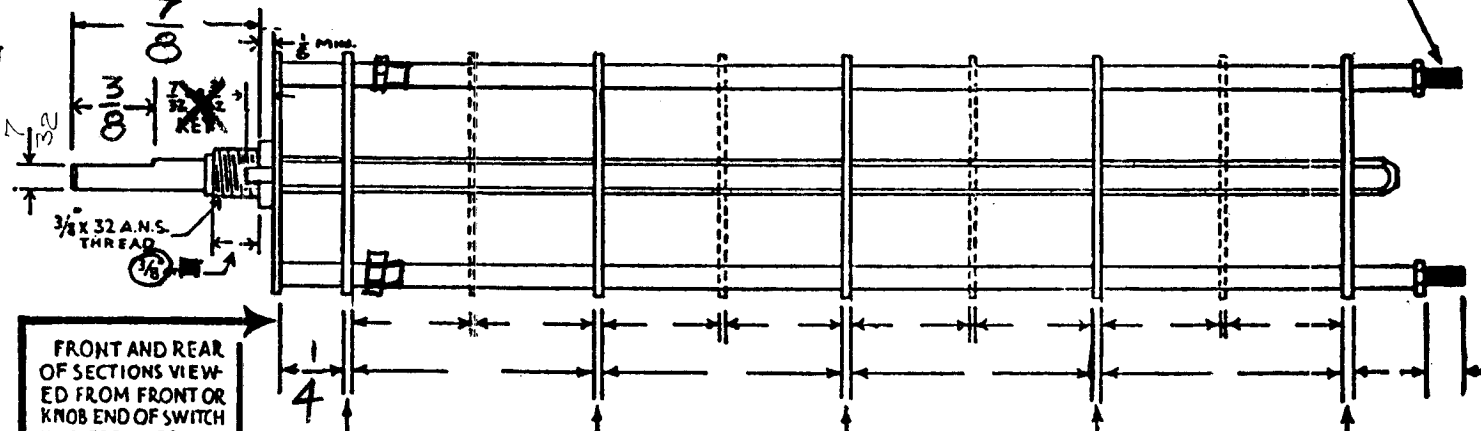
DATE

OAK TYPE F SWITCH

CUSTOMER'S SW-194
PART NO.

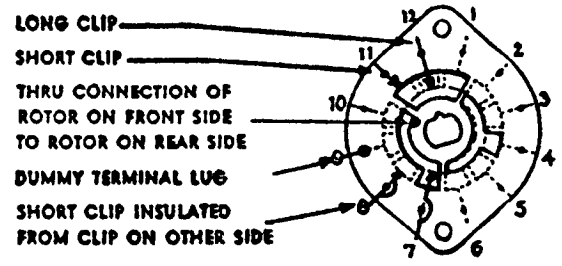


SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A, ± 3°
STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

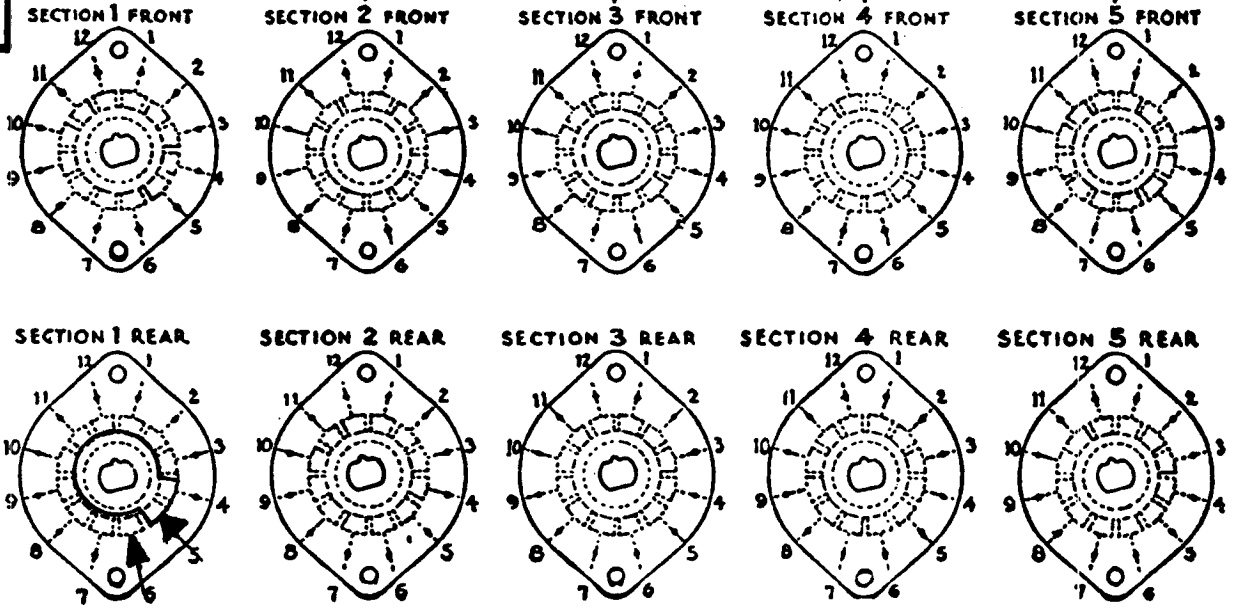


NUMBER OF SECTIONS 1
NUMBER OF POSITIONS 2
ANGLE OF THROW 30 (30° OR 60°)

SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION



CUSTOMER NOTES

Model MSR

B.F.O. ON-OFF SW.	
THE TECHNICAL MATERIAL CORPORATION MAMARONECK, NEW YORK	
DATE Feb. 14, 1957	CHKD. P.L.K.
DRAWN P.L.K.	APPD. H.J.
SHEET OF	NO. SW-194

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE MYCALEX SPECIFY IMPREGNATION IF REQUIRED
 FINISH REQUIREMENTS: COMMERCIAL ; ARMY ; NAVY ; SALT TEST (IF ANY GIVE DETAILS)
 CONTACTS AND ROTORS: SILVER PLATED BRASS ; SOLID SILVER ALLOY ; IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 1 3/8" .32 NUTS 1 ACROSS FLATS; MATERIAL B PLATING Ni
1 3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL B PLATING Ni
 STAMP PART NUMBER SW-194 ON FRONT PLATE, YES NO

CUSTOMER

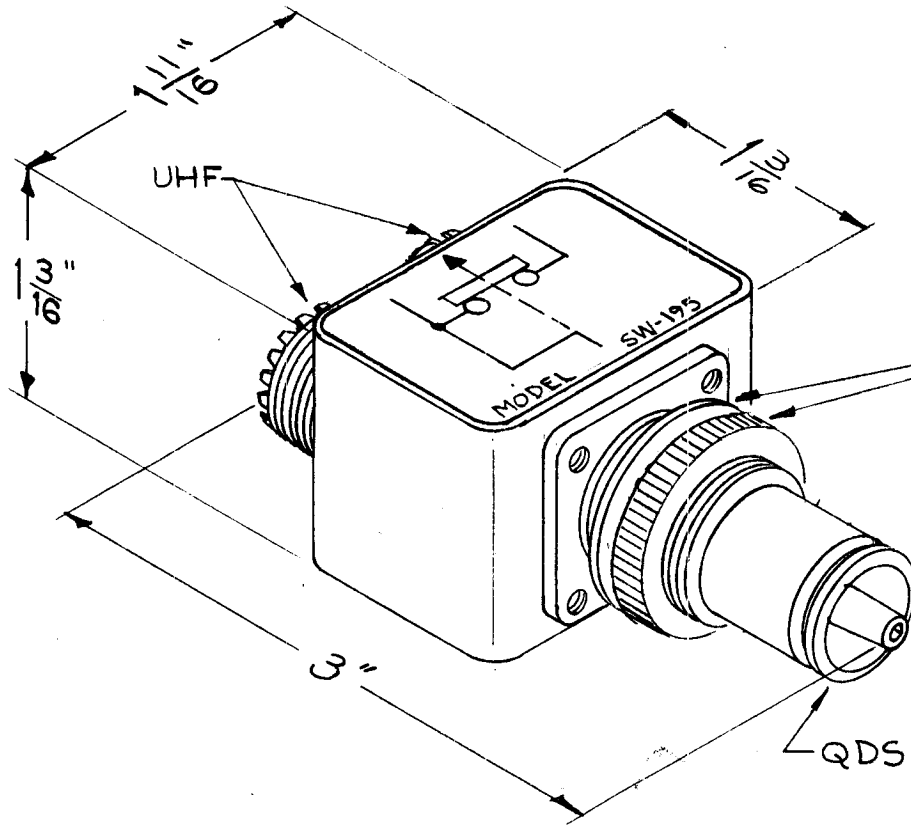
OAK MFG. CO.

1260 CLYBURN AVE., CHICAGO 10, ILL.

REQ. PER UNIT	USED ON		DATE	SW-195	E
	MODEL	ASS'Y. NO.			
1	SW-195		6-24-57		

NOTES:

- 1-CASE-MATERIAL-BRASS
FINISH-SIIS TMC SMOOTH
GRAY ENAMEL.
- 2-CONNECTORS FINISH;
BODIES-RHODIUM FLASH
CONTACTS-GOLD FLASH
- 3-FOR MOUNTING -13/16 DIA
HOLE REQ.
- 4-MAX. PANEL THICKNESS- 3/16.
- 5-SW-195 IS NAVY TYPE
SA-598/U & REPLACES
NT-491388.



SHOULDER
STRAIGHT
KNURLED
MTG. NUT &
INT. LOCKWASHER

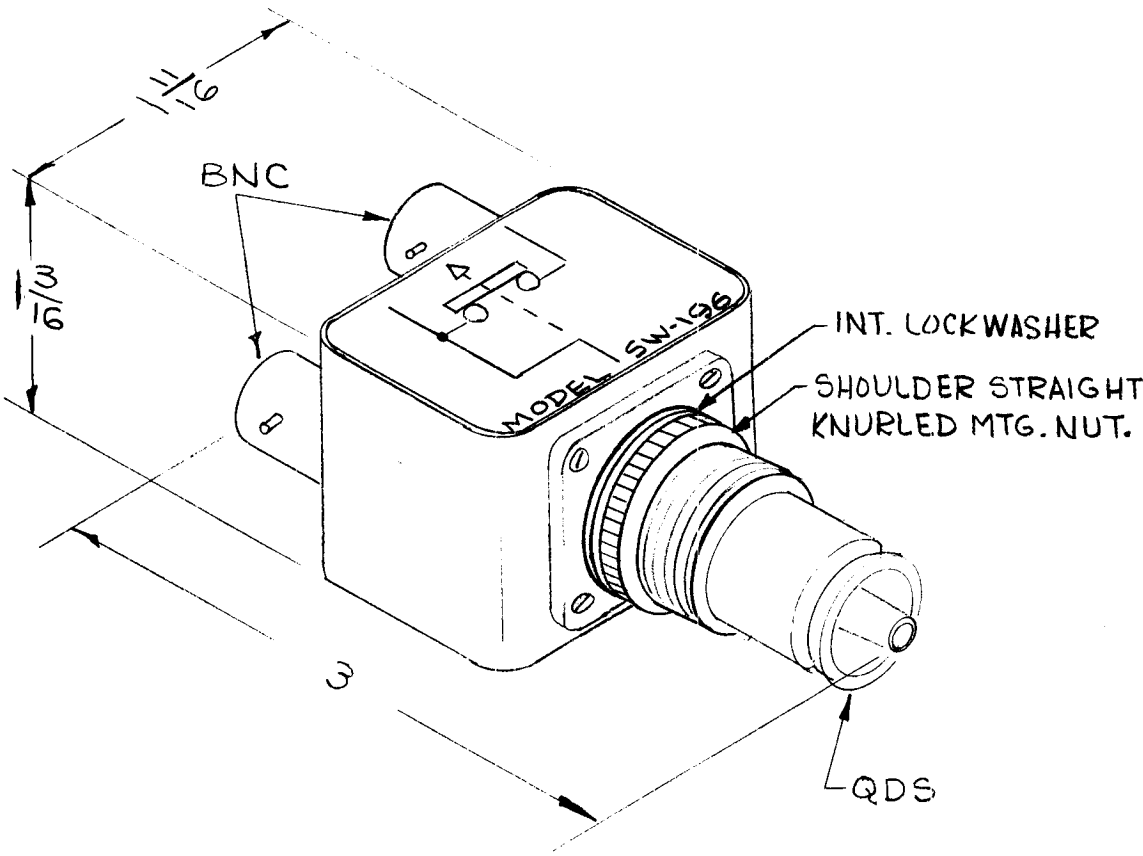
NOTE: ASSIGNED PATENT NO. 2,767,267

E	-	PATENT NOTE ADDED	9/30/65	14846	D.V.	QC/B													
D	1	COMPLETELY UPDATED	1-7-63	7967															
C	2	Lock washer added to note	4/7/61	4614															
	1	Dual 50-239A was 50-239																	
B	1	JJ-162 was JJ-150	8/6/58	418															
A	1	1 1/16 was 1 5/8	10/21/57	1	16														
ISSUE	ITEM	CHAN ED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.												
TOLERANCES			SCALE: 2A-1433																
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES						TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPR VAL						
FRAC. DIM. ±									SEE NOTES										
ANGULAR DIM. ±									FINISH & SPEC. NO.										
										ELEC. DES. APP.	MECH. DES. APP.	SW-195	E						

REQ. PER UNIT	USED ON			SW-196 G
	MODEL	ASS'Y. NO.	DATE	
1	SW-196		1/24/58	

NOTES

1. CASE: MATERIAL - BRASS
FINISH - S-522 TMC SMOOTH GRAY VINYL ENAMEL
2. CONNECTORS FINISH:
BODIES - RHODIUM FLASH
CONTACTS - GOLD FLASH
3. FOR MOUNTING - 13/16 DIAMETER HOLE, 1 REQUIRED
4. MAXIMUM PANEL THICKNESS - 3/16

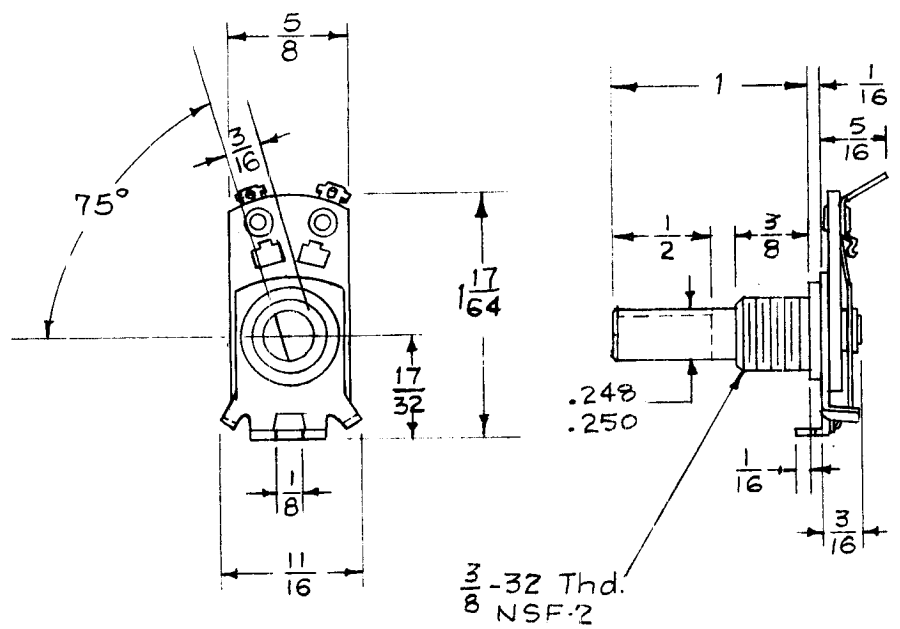


NOTE: ASSIGNED PATENT NO. 2,767,267

REQ.	ITEM	PART NO.	DESCRIPTION			SYMBOL	
		#	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK				
		STOCK SIZE	SWITCH, RF,				
G	1	PATENT NOTE ADDED	DUAL BNC to SINGLE QDS				
F	2	PICTORIAL CLARIFIED					
F	1	NOTES ADDED					
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
		TOLERANCES	SCALE: 2A-1498				
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.				
FRAC. DIM. ±			REMOVE ALL BURRS AND SHARP EDGES				
ANGULAR DIM. ±							
		TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL	
		SEE NOTES				H.J.J.	
		FINISH & SPEC. NO.	ELEC. DES. APP.	MECH. DES. APP.	SW-196 G		

REQ. PER UNIT	USED ON		
	MODEL	ASS'Y. NO.	DATE
1	G5B-1		4-26-57

SW-19'7



NOTE - Angle of flat shown with Switch in C.C.W. Position, as viewed from front.

Angle of throw - 30°
Rotor Grounded to Shaft

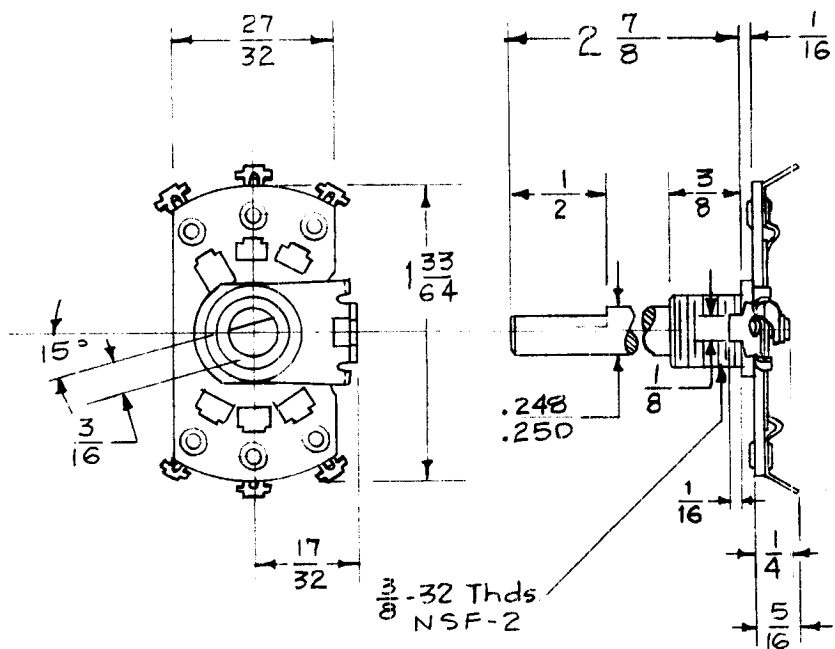
SPECIFICATIONS.

- INDEX MECHANISM — Spring Brass, Single End
- INSULATION — Phenolic, Natural.
- FINISH
Front Plate — Steel, Lead Coated.
Shaft — Steel, Cadmium Plated
- CONTACTS
Clips — Spring Brass, Silver Plated .0001
Rotor Blades — Hard Brass, Silver Plated .0001
Contact Res. — Less than 2.75 Milliohms
- MOUNTING HARDWARE (To Be Supplied By MFG.)
One 3/8-32 Nut, 1/8 THK., 1/2 Across Flats, Brass Cadmium Plate (TMC Equiv.- NTH3732BC16)
One 3/8 Internal tooth Lockwasher, Bronze Cadmium Plate (TMC Equiv.- LW137MRC)

REF - OAK Mfg. Co. Type 20 SPDT

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL					
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK						
			SWITCH, ROTARY, SPDT						
			MATERIAL						
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.		
TOLERANCES			SCALE:						
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES						
FRAC. DIM. ±									
ANGULAR DIM. ±									
TYPE & TEMPER		HEAT TREAT. SPEC.		DRAWN		CHECKED		FINAL APPROVAL	
FINISH & SPEC. N .		ELEC. DES. APP.		MECH. DES. APP.					
		1642657		H.H.O.		A.J.J.		SW-19'7	
		P.L.K.		C.H.					

REQ. PER UNIT	USED ON			SW-198
	MODEL	ASS'Y. NO.	DATE	
1	G5B-1		4-26-57	



SPECIFICATIONS

- 1. INDEX MECHANISM — Spring Brass, Single End
- 2. INSULATION — Phenolic, Natural
- 3. FINISH
 - Front Plate — Steel, Lead Coated
 - Shaft — Steel, Cadmium Plated
- 4. CONTACTS
 - Clips — Spring Brass, Silver Plated .0001
 - Rotor Blades — Hard Brass, Silver Plated .0001
 - Contact Res. — Less than 2.75 Milliohms
- 5. MOUNTING HARDWARE (To Be Supplied By MFG.)
 - One 3/8-32 Nut, 1/8 thk., 1/2 across flats, Brass, Cadmium Plate (TMC Equiv. - NTH3732BC16)
 - One 3/8 Internal tooth Lockwasher, Bronze, Cadmium Plate (TMC Equiv. - LWI37MRC)

NOTE- Angle of flat shown with Switch in C.C.W. Position, as viewed from front.

Angle of throw - 30°
Rotor Insulated

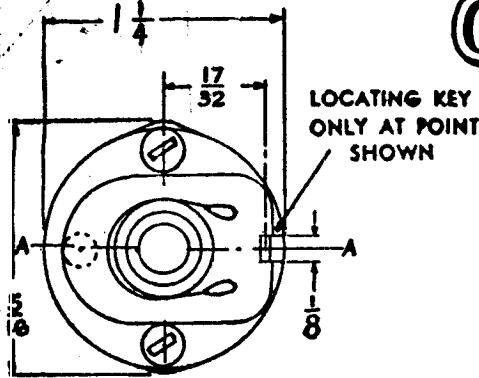
REF- OAK Mfg Co. Type 22 - DPDT

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL					
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK						
			SWITCH, ROTARY, DPDT						
			MATERIAL						
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.		
TOLERANCES			SCALE:						
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES						
FRAC. DIM. ±									
ANGULAR DIM. ±									
TYPE & TEMPER		HEAT TREAT. SPEC.		DRAWN		CHECKED		FINAL APPROVAL	
FINISH & SPEC. NO.		ELEC. DES. APP.		MECH. DES. APP.		SW-198			

CUSTOMER'S PART NO. SW-199-C

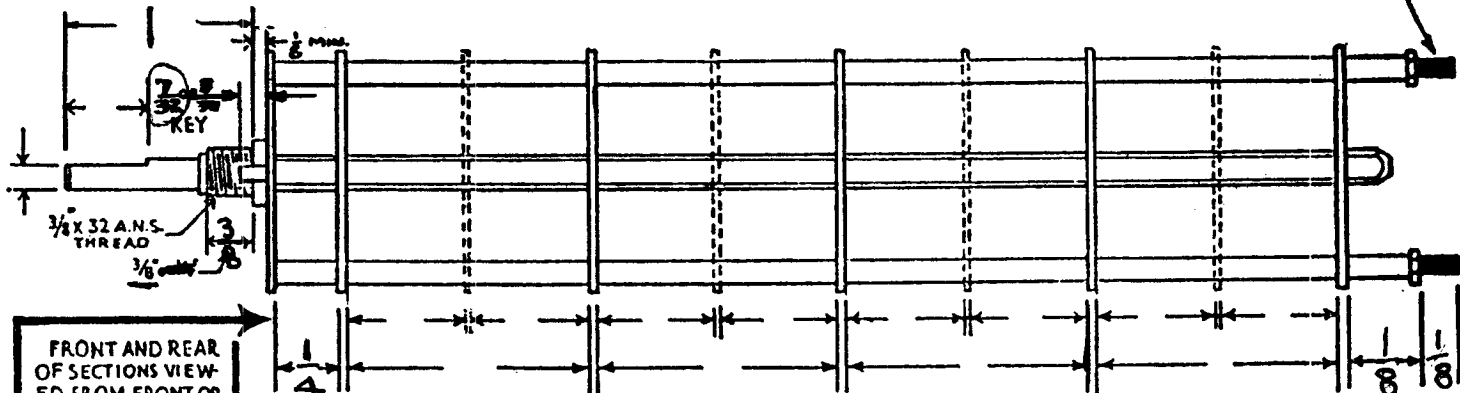
OAK TYPE F SWITCH

SWITCH 4-40 THREAD



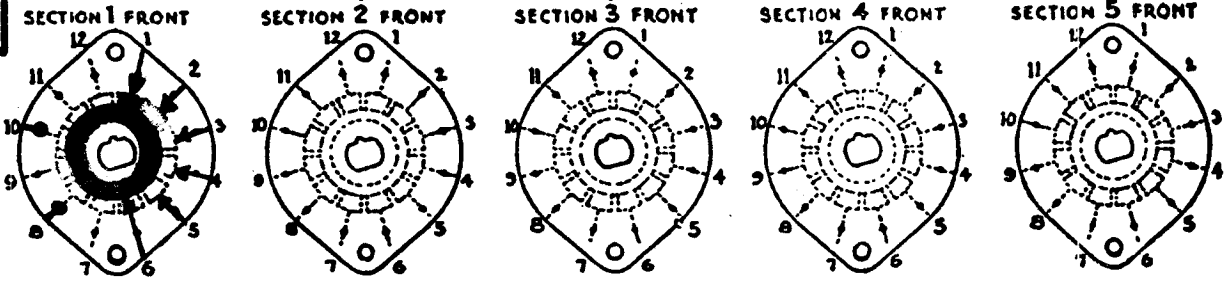
LOCATING KEY ONLY AT POINT SHOWN

SHOW CUT AWAY PORTION OF FLAT IN BLACK AND GIVE ANGLE TO LINE A-A. $\pm 3^\circ$ STANDARD RMA KNURLED AND SLOTTED SHAFT ALSO AVAILABLE

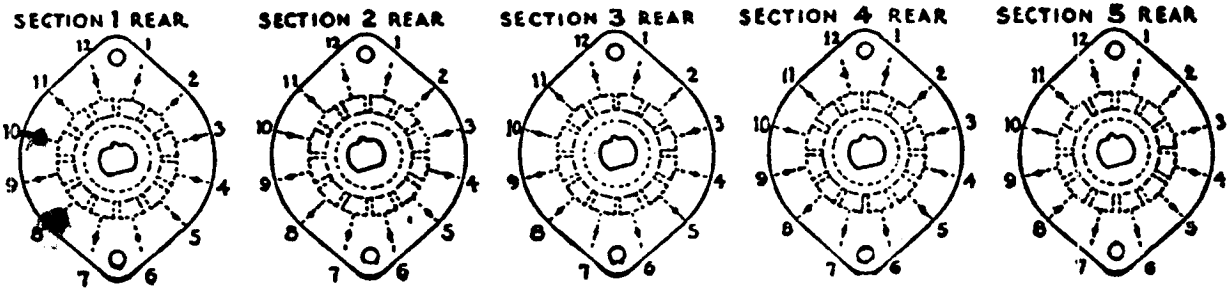
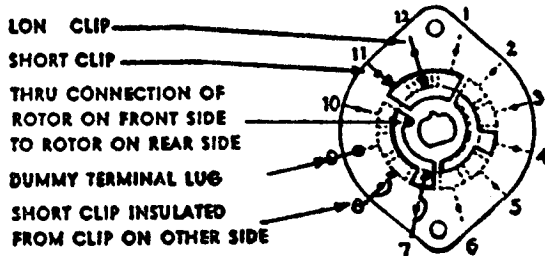


FRONT AND REAR OF SECTIONS VIEWED FROM FRONT OR KNOB END OF SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

NUMBER OF SECTIONS 5
 NUMBER OF POSITIONS 5
 ANGLE OF THROW 30° (30° OR 45°)



SYMBOLS USED IN MARKING PRINT



OUTLINE ROTOR BLADES AS SHOWN ABOVE WITH SWITCH IN EXTREME COUNTER-CLOCKWISE POSITION

SPECIFICATIONS

SHORTING TYPE CONTACTS NON-SHORTING IF NOT SPECIFIED SHORTING TYPE WILL BE SUPPLIED.
 INSULATION: BAKELITE MYCALEX SPECIFY IMPREGNATION IF REQUIRED.
 FINISH REQUIREMENTS: COMMERCIAL ARMY NAVY SALT TEST (IF ANY GIVE DETAILS).
 CONTACTS AND ROTORS: SILVER PLATED BRASS SOLID SILVER ALLOY IF NOT SPECIFIED SILVER PLATED BRASS WILL BE SUPPLIED.
 MOUNTING HARDWARE: SUPPLY 3/8" . 32 NUTS ACROSS FLATS; MATERIAL PLATING
3/8" INTERNAL TOOTH LOCKWASHER; MATERIAL PLATING

STAMP PART NUMBER SW-199-C FRONT PLATE, YES NO

CUSTOMER NOTES

SWITCH, METER MODEL SBE.	
THE TECHNICAL MATERIAL CORPORATION MAMARONECK, NEW YORK	
DATE <u>6-3-57</u>	CHKD. <u>DB</u>
DRAWN <u>Jde</u>	APPD. <u>APB</u>
SHEET <u>1</u> OF <u>1</u>	NO. <u>SW-199-C</u>

REQ UNIT	MODEL	ASSY NO.	DATE
1	SBE-2		5-5-58
1	SBE-3	AP101	11-30-59

CUSTOMER

OAK MFG. CO.

1260 CLYBOURN AVE, CHICAGO 10, ILL.

